

How Manager Characteristic affects Capital Structure in Malaysian Manufacturing Sector: A Formative PLS-SEM Approach

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Abstract: Access to capital is a critical factor in stimulating small business formation and growth. The failure of small business entities in securing the needed capital would entail them remaining small and limiting their ability. Thus, financial decisions by the management are crucial in ensuring that the firm's capital structure is optimal. This study focuses on manufacturing SME companies to examine the influence of manager characteristics (age, gender, working experience, level of education) on capital structure towards technology improvement. Based on the survey of 219 respondents using the PLS-SEM approach, the results showed that only level of study and working experience were positively and significantly affecting capital structure preferences and caused technology improvement in the company. It is concluded that different managements have different leverage privileges with managers trying to attain optimal capital structure. This study would be of immense help to managers to make sound decisions regarding the composition of their capital structure.

Keywords: Manager Characteristic, Capital Structure, Manufacturing, SME.

INTRODUCTION

Business discontinuation is a crucial aspect of economic dynamics, and entries and exits of businesses are closely connected. Given that a large number of SMEs have been unsuccessful, it is expedient to investigate the causes of poor performance and failure of these firms (Arasti, 2011). The reasons for business failure are many and varied, such as limited sources of financing, low productivity, and lack of business experience. Most studies on business failures focused on the business itself rather than on the owner of the business. It cannot be denied that entrepreneurs and related factors are critical factors that contribute to the failure of SMEs (Arasti, Zandi, & Talebi, 2012).

According to Baldwin, Bian, Dupuy, and Gellatly (2000), managerial experience and financial management are vital issues that determine the success or failure of a firm. Based on survey results, almost half of the Canadian insolvent firms become bankrupt due to internal problems caused by managerial inexperience and lack of knowledge in sustaining the business. Based on the findings of Arasti et al. (2012), the failed business owners and managers are mostly in the middle-aged group and they usually did not succeed in the establishment phase of the business. Their businesses did not survive more than three years because of their personal characteristics.

Management characteristics have contributed largely to bankruptcy (Ooghe & De Prijcker, 2008). Insufficient and inappropriate skills of management account for the failure of

unsuccessful start-up companies. Additionally, some managers have experience in management but are without industry-related knowledge and display very authoritarian behavior that increases the rigidity of the company. Apart from management qualities and skills, many personal characteristics strongly affect the performance of a company.

An increasing number of scholars (eg Zabri, 2012; Borgia and Newman, 2012) have begun to question the role played by the owners' or managers' characteristics and attitudes as critical factors for SMEs. Owners or managers have substantial influence over financing decisions in a company (Borgia & Newman, 2012). Companies in the same industry have managements whose characteristics differ. They employ different capital structure models resulting in diverse outcomes (Kyenze, 2014). Many researchers have discussed the relationship between managers' characteristics and debt financing, but little has been done in the Malaysian context, especially in SMEs. Thus, this study attempts to bridge the gap, given that an analysis of managers' characteristics is crucial to understanding the capital structure of the firm.

The purpose of this study is to examine if any significant managerial characteristics such as age, gender, level of education, and experiential background will influence the composition of the firm's capital structure. This study would be of immense help to managers to make sound decisions regarding the composition of their capital structure. If too much debt has been incurred, the future of the company could be jeopardized, leading to bankruptcy. Hence, this study provides and adds new knowledge to corporate managers to serve as benchmarks in making decisions on the company's performance. It would help in enhancing the firm's ability to deal with its competitive environment.

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LITERATURE REVIEW

The subject of capital structure has been extensively examined. Despite the great amount of literature that analyzed the capital structure of companies, the studies conducted on this subject related to managerial characteristics are limited (Dwaikat, Queiri, & Aziz, 2014). Most theoretical and empirical studies that addressed these topics concentrated on the large number of listed firms that dispersed ownership structures. It is doubtful that these findings could be applied to firms under the control of large stockholders, particularly those owned by families, especially small, and medium enterprises (SMEs) have specific goals to concentrate on the survival of companies in the long run. It is argued that SMEs have more aversion to risk than listed companies. To prevent the entrance of new stockholders, small companies will employ the debt in the capital as leverage.

MANAGERS' CHARACTERISTICS AND FINANCING PREFERENCES

Age

Manager's age is a critical component to decide the capital structure of an organization. Kyenze (2014) found a positive significant relationship between the age of CEOs and the performance of the firm. The study concluded that CEOs need to be of a mature age as they are tasked with making important decisions, especially related to external financing. Aterido, Beck, and Iacovone (2011) concluded that older individuals are more likely to use formal banking services compared to younger people. However, Uddin (2014) concluded that the problem faced in raising debt capital doesn't differ with the age of entrepreneurs. Zabri and Lean (2014) also concurred that the age of a manager does not have a statistically significant effect on debt financing. Based on the data from the 1993 National Survey of Small Business Finance, young entrepreneurs were noted to be more likely to use external credit. One could hypothesize from this that the young entrepreneur sees growth potential in his firm as compared to mature firms and thus requires more external capital to fund its growth (Coleman & Carsky, 1999). Similarly, a CEO's age is found to be significantly negatively related to a firm's leverage decision. This is because the older managers tend to be more risk-averse whereas younger managers are willing to undertake risky innovative growth strategies (Ting, Azizan & Kweh, 2014). From the survey in the US and UK on SME financing, Vos, Yeh, Carter, and Tagg (2007) also concluded that young entrepreneurs of SMEs were more actively utilizing external financing. On the other hand, the older entrepreneurs rely to a great extent on retained profits. Bogdana (2009) attempted to summarize and compare the findings on the impact of the ages of CEO on capital structure. He concluded that CEO's age is negatively and statistically significantly related to the corporate capital structure, based on fixed and random effects in panel data. This means that the older the CEOs, the more conservative they become, and consequently, the less they borrow.

H1: There is a relationship between manager's age and capital structure in Malaysian Manufacturing SME companies.

Gender

Apart from CEO's age, gender is another main variable to describe the characteristics of CEOs. Watson, Newby, and Mahuka (2009) mentioned that there is little evidence of actual discrimination by financial institutions against female SME owners in terms of either the average time taken to approve a loan, or the tenure (term) of the loan, or the interest rate charged. The findings failed to uncover any perceptions of discrimination by financial institutions against female SME owners. Therefore, there is no difference in bank loan rejection rates by gender. Uddin (2014) concluded that the problem faced in raising debt capital does not vary with the gender of entrepreneurs. It is consistent with the findings of Zabri and Lean (2014) that showed the gender of a manager does not have a statistically significant effect on debt financing. Similarly, Cassar (2004) noted that differences in the gender of entrepreneurs did not have an impact on the financing preferences. Kyenze (2014) also concluded there is no significant relationship between the gender of the respondents and the performance of the firm. A study by Fourati and Affes (2013) found that men are more likely to obtain external funding than women. A similar observation was made by Vos, Yeh, Carter, and Tagg (2007), who stated that male business owners make the most use of external sources of finance, notably bank overdrafts, bank loans, and supplier's credit. Interestingly, Constantinidis, Cornet, and Asandei (2006) found that women entrepreneurs in the industry sector resorted to bank loans to expand the operational size of their firms. Irwin (2007) pointed out that men are more likely to use family and friends' advice to access finance for SMEs in the UK, whilst women seek external advice, such as from business links and enterprise agencies. In 2007, a majority of female-owned firms sought external funding just as the majority of male-owned firms (Jung, 2010). Female-owned firms resorted to external financing to fund their expansion plans. Irene Ting et al., (2014) were also of the view that a CEO's gender is significantly and negatively related to leverage. They found that male CEOs prefer to incur less debt. Bogdana (2009) examined the gender differences in capital structure selection. He concluded that female managers are more risk-averse and borrow less on behalf of the company. The decision on the number of borrowings is not dependent on the gender of the CEO, as it is made collectively during the executive board meetings. As in other studies, low access to formal external financing is identified as a constraint to female SME owners compared to male counterparts in the South Asia region (Wellalage, Dupati & Fauzi, 2013). Kapunda (2016) also agreed with Bogdana (2009) that women experienced more problems in raising external funds than their male counterparts. Aterido et al. (2011) concluded that firms with female ownership participation tend to have less access to external finance in the African countries. The female entrepreneurs in the African countries must overcome greater legal barriers compared to their male peers. The firms with female CFOs face tighter credit availability and are more often required to provide collateral despite their loans being already approved. Furthermore, banks prefer to claim mortgage collaterals when lending to companies under the control of female CFOs, while they are more inclined to require guarantee collaterals when lending to companies under the control of male CFOs.

This suggests that the collateral clauses are more restrictive to female CFOs than to male CFOs. It could be surmised that female CFOs are less likely to obtain external financing from financial institutions (Xu, Li, & Chang, 2016).

H2: There is a relationship between manager's gender and capital structure in Malaysian Manufacturing SME companies.

Education

An entrepreneur who is highly educated is said to be able to manage his or her business better than one who is less educated. Aterido et al. (2011) mentioned that education is a strong predictor of the use of banking services, with the use increasing linearly in most countries. Chong and Mahmoud (2013) noted that highly educated entrepreneurs are usually successful in managing SMEs. Frank and Goyal (2007) mentioned that CEOs who have an MBA or law degree tend to have greater leverage. According to Fourati and Affes (2013), many educated entrepreneurs resort to bank and external financing. This could be attributed to the fact that they have sufficient financial knowledge and are aware of the varied sources of financing. This is in line with Zabri and Lean (2014) who found that managers' level of education is significantly related to debt financing. Kyenze (2014) also concluded there is a significant association between the level of education of the CEO and the performance of the firm. His findings showed that the majority of the CEOs of NSE-listed companies have a master's degree. Constantinidis et al. (2006) studied financing patterns of enterprises owned by women in Belgium and found that women owners with low educational levels were more likely to encounter problems in their access to financing than those who were highly educated. Indeed, women with higher educational qualifications and additional training are in an advantageous position in terms of securing financing. The less educated SME owner more actively seeks external financing to avert the fear of loan denials (Vos et al., 2007). In addition, Zabri, Ahmad, and Lean (2015) also found that the level of education of managers has a statistically significant negative relationship with external equity financing. It is noted that the more knowledgeable the owner-managers, the lesser their preferences for external equity financing. In contrast, Borgia and Newman (2012) studied the effects of manager level of education in Chinese SMEs and the finding showed that the education levels of the owner or managers did not significantly impact the amount of debt used in their capital structure. Cassar (2004) also affirmed that the educational levels of entrepreneurs did not impact their financing preferences.

H3: There is a relationship between manager's education and capital structure in Malaysian Manufacturing SME companies.

Experience

Manager's experience could be considered a measure of reputation and private entrepreneurs who are experienced are more likely to choose formal financing. Managers with a greater level of business experience are found to take advantage of bank financing (Zabri et al. 2015). This is because the owner or manager's experience plays an important role in reducing asymmetric information flow between the firm and

external investors. Borgia and Newman (2012) observed that the owner or manager's experiences are significantly and positively related to the level of a firm's leverage. Fourati and Affes (2013) stated that high industrial experience increases the probability of using external equity in financing venture activities. In other words, an increase in entrepreneurial experience decreases the probability of having external debt in the firm's capital structure. Similarly, high capital requirements for large firms discourage inexperienced and undercapitalized entrepreneurs from undertaking large ventures (Parsa, Rest, Smith, Parsa, and Bujisic, 2015). Constantinidis et al. (2006) noted that women encountered no problems with access to external financing if they have business experience, that is, they have worked as an employee or owner in the family business. However, according to Cassar (2004), the diverse experiences of entrepreneurs did not appear to have an impact on financing preferences. Zabri and Lean (2014) were also of the view that the experience of a manager is not significantly related to debt financing. Similarly, the findings of Klacmer Calopa et al. (2014) indicated that the experiences of entrepreneurs are not necessarily associated with the financing methods used. Bogdana (2009) affirmed that a CEO's experience does not statistically significantly influence the corporate capital structure. Scott and Irwin (2009) on the contrary, found that inexperienced owner-managers have difficulties raising debt. They do not have enough credit scoring to obtain loans compared to the more experienced entrepreneurs.

H4: There is a relationship between manager's experience and leverage in Malaysian Manufacturing SME companies.

Impact of Capital Structure on Technology Improvement

There are some researchers who did their research on the relationship between loan approval and technology adopted in Malaysian SMEs. Dube (2013) studied the impact of debt financing on the productivity of SMEs in Masvingo Urban. His findings showed that debt finance had a positive impact on the productivity of SMEs that received adequate funding from banks. Chong and Mahmoud (2013) concluded that new products attract more investors to invest. Chiang, Albert, and Eddie (2002) also mentioned that better access to finance enables companies to upgrade their technology and managerial capacity. Bakar and Ahmad (2010) concluded that most SMEs are reputable and have tremendous opportunities to obtain loans and financial assistance for their product innovation. The internationalization of SMEs has expanded due to technological development that reduced costs and risks (Hashim, 2012).

H5: This is relationship between capital structure and the firm's technology improvement.

Theoretical Model

The theories suggest that firms decide on a capital structure based on the attributes that determine the various costs and benefits associated with debt and equity financing (Abor and Biekpe, 2009). After the work of Modigliani and Miller (1958), several theories of capital structure have been developed to explain the optimal capital structure. Pecking order

theory, trade-off theory, and agency theory are the most popular theories of capital structure.

Modigliani and Miller's Theory (M&M) forms the foundation of capital structure theories (Kumar and Rao, 2015). The assumption of the Modigliani and Miller Theory (1958) is that firms have a particular set of expected cash flows. After finalizing the selection of a certain proportion of debt and equity to finance the firm's assets, the cash flow would be allotted among the investors. Investors and firms are assumed to have equal access to financial markets, which allows for homemade leverage. Therefore, the leverage of the firm has no effect on the market value of the firm (Luigi & Sorin, 2009). M&M assumed that the market is perfect and has no influence on the value of a firm, investors have homogeneous expectations, it is a tax-free economy and there are no transaction costs. However, this theory is inapplicable as it is based on restrictive assumptions and is inconsistent with the real world. Investors prefer to buy undervalued shares and sell them at higher prices to earn income (Salim & Yadav, 2012). Hence, Modigliani and Miller (1963) revised their position by incorporating tax benefits as determinants of capital structure. To strengthen this argument, M&M explained that a firm that honors its tax obligation benefits from partially offsetting interest called a tax shield in the form of payment of lower taxes. Thus, the firms are able to maximize their value by employing debt due to tax shield benefits associated with debt use (Ahmad et al., 2012). M&M theory was criticized due to some weaknesses and inapplicable assumptions. Nevertheless, it provided the foundation for other theories put forth that took into consideration the market imperfections. The M&M theory has been expanded into the pecking order theory and trade-off theory.

Pecking order theory (POT) propounded by Myers and Majluf (1984) argued that firms prioritize their sources of financing and usually prefer internal financing. If external financing is needed then debt is chosen and equity would be the last resort. To avoid the underinvestment problem, managers seek to finance new projects using security that is not undervalued by the market, such as internal funds and riskless debt. This is because a firm has more information than outsiders and information asymmetry investors demand more premiums for information-sensitive securities (e.g. equity). This implies that firms with a high level of profits have a lower leverage ratio due to being capable to finance investment needs by internal sources, and external sources are deemed unnecessary. However, when the company is un-

profitable, they tend to use debt as external financing when its cash flow is not enough to fulfil investment needs (Dwaikat et al., 2014).

The second theory, the trade-off theory (TOT) implies that leverage has a positive relationship contrary to the pecking order theory. It assumes the presence of an optimal capital structure that maximizes shareholders' wealth and simultaneously minimizes external claims to wealth. It considers the trade-off between the benefits of interest tax shield of debt and the cost of financial distress (Kumar & Rao, 2015). The advantage of borrowing allows companies to attain a tax shield, that is, a company pays lower tax when it incurs more debt. Companies are most likely to use debt financing up to a certain level until the cost of financial distress starts to surface (Saarani & Shahadan, 2013). A highly leveraged with a high debt ratio is always associated with the need for high returns. This is because the firm is exposed to bankruptcy risk if not managed well. This explains why highly leveraged firms require high returns to compensate for the risk. Incidentally, interest payment for debt is tax-deductible. An optimal capital structure could therefore be achieved by the firm to enjoy the maximum tax benefits. To conclude, the trade-off theory gathers pros and cons of the usage of debt. On one side, the usage of debt in capital structure gives a reduction of tax burdens; However, an increase in the level of debt comes with the risk of bankruptcy, since the likelihood of bankruptcy rises with the degree of the company's indebtedness (Dwaikat et al., 2014).

The last theory is agency cost which is provided by Jensen and Meckling (1976) discusses the conflict of interest between principals (shareholders) and decision-makers (agents) of firms (managers, board members, etc). This conflict stems from the differences in behavior or decisions by pointing out that the parties (agents and shareholders) often have different goals and different tolerances toward risk. In this case, the managers are responsible for guiding the firm toward achieving their personal goals rather than maximizing benefits to the shareholders. Hence, the main conflict that shareholders face is ensuring that managers (agents) do not invest the free cash flow in unprofitable projects. If the companies have high cash flow and profitability, increasing debts can be used as a tool of reducing the scope for managers until the resources of the company may not be wasted as a result of their activities (Negasa, 2016). There are some researchers who argued that the leverage ratio is high when managerial ownership is low, as the agency cost is also less.

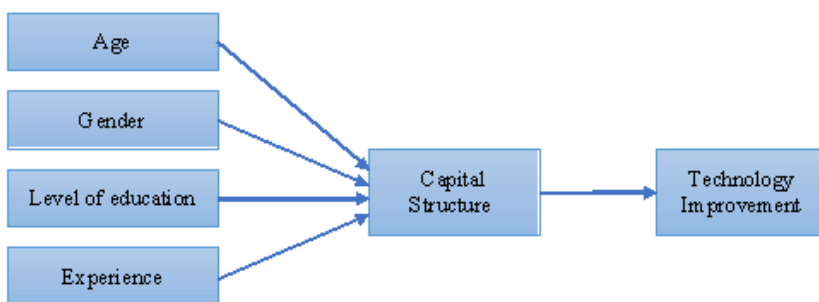


Fig. (1). Theoretical Model.

Sources: Developed for research.

RESEARCH METHODOLOGY

The data were collected using a structured questionnaire survey. Prior to using the questionnaire for data collection, a detailed pre-pilot test was conducted by sending it to 30 Malaysian SME manufacturing companies to increase its validity. A pilot study removes any doubts about the validity and reliability of the instrument. Thus, the final questionnaire would incorporate the suggestions obtained from the pilot study and the necessary amendments are made. The developed questionnaire consists of two sections. Section one captured the demographics of the company such as legal status, company location, company main activities, number of employees, annual gross profit, annual sales turnover, and year of establishment. In section two, respondents were asked to indicate their preferences for capital structure, sources of funding, and their technology performance. The Census method is the best method to collect data from SMEs listed in SMEs Corp as it incorporates all companies in the manufacturing sector from the FMM directory. Out of the 1365 survey questionnaires distributed, 235 sample responses were returned. However, only a total of 225 questionnaires were usable. 10 questionnaires were not included in the data analysis due to incompleteness. A total of 225 respondents represents approximately 15.6 percent covering a broad range of the Malaysian manufacturing sector. This response rate of 15.6 percent is a common response rate within the context of research on Malaysian manufacturing companies (Olusegun, Hasbullah & Nordin, 2014). However, there were 6 sets of questionnaires that fell out of the range and considered as outliers. Henceforth, the data set in this study was 219 after removing the undesirable outliers. SmartPLS and SPSS software have been used for data analysis in the next session.

DATA ANALYSIS

Descriptive Analysis

This study employed a sample size of 219 respondents with the following descriptive characteristics. As shown in Table 1, most of the respondents come from a limited liability company (77.6 percent), whilst the rest are limited liability partnerships (9.6 percent), partnerships (6.8 percent), and sole proprietorship (5.9 percent). In terms of the company's main activities, electrical and electronic products (53 firms) and chemicals, chemical products, and petroleum products (64 firms) are the main contributors to the manufacturing sector. Followed by wood and wood products (48 firms), 19

firms come from textiles, apparel, and footwear, 13 firms, each from construction and related materials and transport equipment, and only 9 firms come from food products, beverage, and tobacco products.

Most of the respondents come from Selangor (27.4 percent), followed by Pulau Pinang (25.1 percent), Johor (17.4 percent), Perak (17.4 percent), Negeri Sembilan (3.7 percent), WP Kuala Lumpur (3.2 percent), Melaka (1.8 percent), and Pahang (1.4 percent). However, no response was received from Kelantan, Perlis, Terengganu, Sabah, and Sarawak within the time frame given. Respondents were given categorical groups of full-time employees to determine their firm size (less than 5 employees categorized as micro, 5 employees to 75 employees categorized as a small firm, and 75 employees to 200 employees categorized as medium-sized enterprises). The majority of firms in this study are medium enterprises, which is 156 firms, 47 firms are small enterprises and only 16 firms are microenterprises. Based on the information on annual sales turnover, 6 firms have an annual sales turnover of less than RM300,000. Another 55 firms had an annual sales turnover of RM300,000 to less than RM15 million. The rest of the respondents had sales annual turnover of more than RM15 million to RM25 million. Finally, around 172 firms (78.5 percent) of company respondents have 5 to 10 years in the year of establishment.

FINDINGS

The structural model was analyzed using SmartPLS 3.2 to perform PLS-SEM to test the hypothesized relationships between manager characteristics (age, gender, level of study, and working experience toward dependent variable as leverage in Malaysian Manufacturing companies. There are several steps for formative measurement. The first step is to conduct the collinearity by computing the tolerance which represents the amount of variance of one formative indicator that is not explained by other indicators in the same block. The variance inflation factor (VIF) is 5 and higher, indicating the potential presence of collinearity problem in PLS-SEM (Hair, Ringle & Sarstedt, 2011). Table 2 shows that all the VIFs of the indicators are below the threshold 5, suggesting no collinearity problem exists. The next step is to carry out the bootstrapping procedure to assess the significance and relevance of the formative indicators. Table 2 summarizes the results of the formative measure of internal and external financing by showing the original outer weight estimates, t-values, and significance level.

Table 1 Demographic Profile of Company.

	Frequency	Percentage (%)
<i>Legal Status</i>		
Sole Proprietors	13	5.9
Partnership	15	6.8
Limited Liability Partnership	21	9.6
Limited Liability Company	170	77.6

	Frequency	Percentage (%)
<i>Company Location</i>		
Johor	38	17.4
Kedah	6	2.7
Kelantan	0	0.0
Melaka	4	1.8
Negeri Sembilan	8	3.7
Pahang	3	1.4
Perak	38	17.4
Perlis	0	0.0
Pulau Pinang	55	25.1
Sabah	0	0.0
Sarawak	0	0.0
Selangor	60	27.4
Terengganu	0	0.0
WP Kuala Lumpur	7	3.2
WP Labuan	0	0.0
<i>Company's main activities</i>		
Electrical and Electronic Products	53	24.2
Chemicals, Chemical Products and Petroleum Products	64	29.2
Wood and Wood Products	48	21.9
Textiles, Apparels and Footwear	19	8.7
Construction and Related Materials	13	5.9
Transport Equipment	13	5.9
Food Products, Beverage and Tobacco Products	9	4.1
<i>Number of fulltime employees</i>		
Less than 5 workers	16	7.3
5 workers to less than 75 workers	47	21.5
75 workers to less than 200 workers	156	71.2
<i>Annual sales turnover</i>		
Less than RM300,000	6	2.7
RM300,000 to less than RM15 million	55	25.1
RM15 million to less than RM50 million	158	72.1
<i>Annual gross profit</i>		
Less than RM300,000	23	10.5
RM300,000 to less than RM15 million	92	42.0
RM15 million to less than RM50 million	105	47.5
<i>Year of Establishment</i>		
Below 1 year	9	4.1

	Frequency	Percentage (%)
More than 1 year to less than 3 years	16	7.3
More than 3 year to less than 5 years	22	10.0
More than 5 years to less than 10 years	172	78.5
More than 10 years	0	0.0

Source: Developed for research

Table 2. Formative Measure, Variance Inflation Factor (VIF) and Outer Weight Significance Testing Results

Dependent Variable	Independent Variable	VIF	Outer Weight	T Statistics	Hypothesis Supported
Capital Structure	Age	1	1	0.682	H1: Not Supported
	Gender	1	1	0.137	H2: Not supported
	Level of Education	1	1	1.312*	H3: Supported
	Working Experience	1	1	1.323*	H4: Supported

Notes: *** Significant at 1 percent, ** significant at 5 percent, * significant at 10 percent

DISCUSSION

The findings from Table 2 show that managers’ level of education and working experience are positively significant with capital structure. It is shown that managers with the highest level of education and more working experience tend to use more capital (Chong & Mahmoud, 2013; Frank & Goyal, 2007; Kyenze, 2014; Zabri and Lean, 2014). However, the age of the manager (younger or older) doesn’t significantly affect company financing (either internal or external). Furthermore, financing preferences are not decided based on gender (male or female) in Malaysian Manufacturing SMEs.

Lastly, the capital structure also showed a positive relationship at a 5% significance level to improve the manufacturing’s technology performance in Table 3. It is evidently proven that all financing distributions will improve SME manufacturing technology in the future.

Table 3. Relationship of Internal and External Financing on Technology Improvement

Dependent Variable	T Statistics	Independent Variable	Hypothesis Supported
Technology Improvement	1.999**	Capital Structure	H5:Supported

Notes: *** Significant at 1 percent, ** significant at 5 percent, * significant at 10 percent

CONCLUSION

Small and medium enterprises (SMEs) have become a strength of economies overall in the world. Despite increas-

ing importance to the economy, SMEs are still struggling with regards to the access to finance. An understanding of the factors influencing the capital structure is essential to improve sustainability and contribution to the Malaysian economy. This study focuses on manufacturing SME companies to examine the influence of manager characteristics (age, gender working experience, level of education) on capital structure towards technology improvement. Based on PLS-SEM bootstrapping results, only managers’ level of education and working experience have positive and significant effect on capital structure. However, the manager’s age and gender diversity were rejected and did not significantly influence the financing decision. Technology improvement has also been affected by capital structure decisions. It is concluded that different managements have different leverage privileges with managers trying to attain optimal capital structure. This study would be of immense help to managers to make sound decisions regarding the composition of their capital structure.

REFERENCES

Arasti, Z. (2011). An empirical study on the causes of business failure in the Iranian context. *African Journal of Business Management*, 5(17), 7488-7498.

Arasti, Z., Zandi, F., & Talebi, K. (2012). Exploring the effect of individual factors on business failure in Iranian newly established small businesses. *International Business Research*, 5(4),2.

Ateriod, R., Beck, T., & Lacovone, L. (2011). Gender and finance in Sub-Saharan Africa: Are women disadvantaged? *World Bank Policy Research Working Paper Series*.

Bakar, L. J. A., & Ahmad, H. (2010). Small medium enterprises’ resources and the development of innovation in Malaysia, *Journal of Innovation Management in Small and Medium Enterprises*, 1-14.

Baldwin, J. R., Bian, L., Dupuy, R., & Gellatly, G. (2000). Failure rates for new Canadian firms: New perspectives on entry and exit. *Failure Rates for New Canadian Firms: New*

Bogdana, D. (2009). Corporate capital structure choice: Does managers’ gender matter. Working thesis, Kyiv School of Economics.

Borgia, D., & Newman, A. (2012). The influence of managerial factors on the capital structure of small and medium-sized enterprises in emerging economies: Evidence from China. *Journal of Chinese Entrepreneurship*, 4(3), 180-205.

Cassar, G. (2004). The financing of business start-ups. *Journal of Business Venturing*, 19(2), 261-283.

Chiang, Y. H., Albert, C. P. C. & Eddie, H. C. M. (2002). Capital structure and profitability of the property and construction sectors in Hong Kong. *Journal of Property Investment & Finance*, 20(6), 434-453.

Chong, K. G., & Mahmoud, K. A. (2013). The determinants of SME succession in Malaysia, from entrepreneurship perspective. *Journal of Advanced Social Research*, 3(12), 350-361.

Constantinidis, C., Cornet, A., & Asandei, S. (2006). Financing of women-owned ventures: The impact of gender and other owner-and firm-related variables. *Venture Capital*, 8(2), 133-157.

Coleman, S., & Carsk, M. (1999). Sources of capital for small family-owned businesses: Evidence from the national survey of small business finances. *Family Business Review*, 12(1), 73-84.

- Dwaikat, N. K., Queiri, A. R., & Aziz, M. N. (2014). Capital Structure of Family Companies. *International Conference on Business, Law and Corporate Social Responsibility (ICBLCSR'14)*.
- Dube, H. (2013). The impact of debt financing on productivity of small and medium scale enterprises (SMEs): A case study of SMEs in Masvingo Urban, *International Journal of Economics, Business and Finance*, 1(10), 371-381.
- Frank, M. Z., & Goyal, V. K. (2007). Corporate leverage: How much do managers really matter? Available at SSRN 971082.
- Fourati, H & Affes, H. (2013) The capital structure of business start-up: Is there a pecking order theory or a reversed pecking order?- Evidence from the panel study of entrepreneurial dynamics. *Technology and Investment*, 4(4), 244.
- Jung, O. (2010). Small Business Financing Profiles: Women Entrepreneurs, SME Financing Data Initiative.
- Kumar, S., & Rao, P. (2015). A conceptual framework for identifying financing preferences of SMEs, *Small Enterprise Research*, 22(a), 99-112.
- Luigi, P., & Sorin, V. (2009). A review of the capital structure theories. *Annals of Faculty of Economics*, 3(1), 315-320.
- Hashim, F. (2012). Challenges for the internationalization of SMEs and the role of government: The case of Malaysia, *Journal of International Business and Economy*, 13(1), 97-122.
- Kapunda, S. M. (2016). SME Finance, development and trade in Botswana: A gender perspective. *Business Management Review*, 11(1). 30-54.
- Klacmer Calopa, M., Horvat, J., & Lalic, M. (2014). Analysis of financing sources for start-up companies. Management: *Journal of Contemporary Management Issues*, 19(2), 19-44.
- Kyenze, A. M. (2014). The effect of managers' characteristics on the capital structure of firms listed at the Nairobi securities exchange. *Doctoral dissertation, University of Nairobi*.
- Negasa, T. (2016). The Effect of Capital Structure on Firms' Profitability (Evidenced from Ethiopian). Preprints 2016, 2016070013 (doi: 10.20944/preprints201607.0013.v1).
- Ooghe, H., & De Prijcker, S. (2008). Failure processes and causes of company bankruptcy: A typology. *Management Decision*, 46(2), 223-242.
- Parsa, H.G., & Rest, J. P. I, Van der, Smith, SR, Parsam RA & Bujisic, M. (2015). Why restaurants fail? Part IV the relationship between restaurant failures and demographic factors. *Cornell Hospitality Quarterly*, 56(1), 80-90.
- Saarani, A., & Shahadan, F. (2013). The determinants of capital structure of SMEs in Malaysia: Evidence from enterprise 50 (E50) SMEs, *Asian Social Sciences*, 9(6), p.64.
- Salim, M.& Yadac, R. (2012). Capital Structure and firm performance: Evidence from Malaysian listed companies. *Proceedings-Social and Behavioral Sciences*, 65, 156-166.
- Scott, J. M., & Irwin, D. (2009). Discouraged advisees? The influence of gender, ethnicity and education in the use of advice and finance by UK SMEs. *Environment and Planning C: Government and Policy*, 27(2), 230-245.
- Ting, I. W. K., Azizan, N. A., & Kweh, Q. L. (2014). Human governance and firm's leverage decision: Evidence from Malaysian listed companies. *Social Sciences & Humanities*, 22(3), 879-890.
- Uddin, M. A. (2014). Problems faced by micro, small and medium enterprises in raising debt capital, *Proceedings of the Social Sciences ICSSR*.
- Vos, E., Yeh, A.J.Y., Carter, S., & Tagg, S. (2007). The happy story of small business financing. *Journal of Banking & Finance*, 31(9), 2648-2672.
- Watson, J., Newby, R., & Mahuka, A. (2009). Gender and the SME "finance gap", *International Journal of Gender and Entrepreneurship*, 1(1), 42-56.
- Wellalage, N., Dupati, G. Fauzi, F. (2013). Institutional factors create additional glass ceilings: Evidence from female owned South-Asian SMEs' access to external financing. *Asian Institute of Management*.
- Xu, X., Li, Y., & Chang, M. (2016). Female CFOs and loan contracting: Financial conservatism or gender discrimination? An empirical test based on collateral clauses. *China Journal of Accounting Research*, 9(2), 153-173.
- Zabri, S. M. (2012). The determinants of capital structure among SMES in Malaysia. In *Proceedings of International Conference of Technology Management, Business and Entrepreneurship*.
- Zabri, S. M, & Lean, J. (2014). SME managers' financing preferences: The case of successful SMEs in Malaysia. In *Proceedings of 5th Asia Pacific Business Research Conference*.
- Zabri, S. M, Ahmad, K. & Lean, J. (2014). Understanding owner-managers' preferences towards different sources of financing: The case of successful SMEs in Malaysia. *Advanced Sciences Letter*, 21(5), 1435-1438.

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