CHAPTER 3
Testing the Pecking Order Theory of Capital Structure on Small and Medium-sized Enterprises in Africa

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Abstract

This chapter is based on a PhD thesis by Katie Musungu Mutula, who passed on in early March 2021. The research, which Dr Tang was supervising, explores the pecking order theory and the importance of multiple determinants in the capital structure decisions of Small and Medium-Sized Enterprises (SMEs) in Africa, using a panel data analysis of 2126 firms from 2007-2018. The results suggest that SMEs follow a pecking order model. Age, size, profitability, firm growth, access to finance and internal assets all play an important role in determining SME's capital structure. Moreover, evidence suggests that financial variables, particularly profitability and access to finance, are crucial since they have the largest impact on the capital structure of SMEs.

Keywords: pecking order, capital structure, trade-off, SMEs

1 Introduction

Since the seminal papers of Myers (1984) and Myers and Majiluf (1984), capital structure theories have dominated the corporate finance literature. These studies have focussed on how firms make financing decisions

relative to their debt and equity mix. In particular, the pecking order and trade-off theories of capital structure have been the most reviewed. They are seen to be the two competing theories of capital structure within the literature. The premise of the pecking order theory is that firms will follow a hierarchy when deciding how to finance their operations by prioritising internal funding before considering external debt and, lastly, equity.

On the contrary, the trade-off theory postulates that a firm will aim to achieve an optimal debt target, which balances the costs against the benefits of obtaining debt instead of equity, to maximise the firm's value. For the majority of studies (Adair & Adaskou 2015; Shyam-Sunder & Myers 1999; Tong & Green 2005), evaluating the capital structure decisions of firms has involved testing the validity of both pecking order and trade-off theories to establish which one performs best in explaining corporate financing decisions. Mixed results have ensued, with some studies finding evidence of the pecking order theory (Bhama *et al.* 2016) and others finding evidence for the trade-off theory (Abel 2018). Still, other studies have not found conclusive evidence pointing to either of the theories informing the capital structure decisions of firms (Frank & Goyal 2007b; Adair & Adaskou 2015). However, many studies have supported the pecking order theory concerning the capital structure of SMEs (Cassar & Holmes 2003; López-Gracia & Sogorb-Mira 2008; Matias & Serras-queiro 2017).

In general, decisions that inform the capital structure of firms are arguably the most important to any corporation, as they communicate how a firm is likely to maximise its market value and may also impact its cost of capital. In the case of SMEs, the significance of the decisions on capital structure is heightened due to the challenges that SMEs face relative to large firms that would result in bankruptcy should there be a failure to honour debt obligations (Honjo & Harada 2006).

In addition, because SMEs find it difficult to access finance, their financing strategies would be vital in determining how they maximise their value and performance and minimise their cost of capital due to the debt-to-equity option they choose.

The rationale for studying the capital structure decisions of SMEs has grown exponentially in recent times, especially since access to finance remains a major obstacle in the development of SMEs in general and especially in Africa.

SMEs are engines of economic growth known for their instrumental

role in developing national economies through employment creation, income generation and innovation. On average, SMEs account for 95% of all firms within the business sector in developing and developed countries (WTO 2016). In the Organization for Economic Cooperation and Development (OECD) countries, SMEs account for about 70% of employment, whereas in emerging economies, SMEs contribute about 45% to employment (OECD 2017). In Sub-Saharan Africa, the contribution to employment by SMEs is about 80% (World Economic Forum 2015). Despite the widespread agreement regarding SMEs' contribution to economic development, there is a lack of consensus on how SMEs are defined across various countries and regions. The absence of a universal definition presents a problem in classifying firms irrespective of region or development status. In general, the term SME may refer to companies that do not constitute large corporations or, more specifically, to small and medium-sized ventures. In some instances, the term SME may also include micro-enterprises, which are considered smaller than other SMEs in size, for example, by having less than ten employees (European Commission 2016).

The number of employees, annual sales, total assets and total capital of a firm are different criteria used in determining how SMEs may be defined and tend to vary from country to country (Akinyemi & Adejumo 2017). These criteria indicate firm size and are useful in classifying firms into micro, small or medium enterprises for an operational definition. However, the number of employees is used widely as an indicator of firm size compared to other criteria (Inan & Bititci 2015). The term SME may hold various meanings under different contexts depending on the criteria used and the threshold for each criterion. For example, using the number of employees as an indicator, SMEs in the United States generally comprise firms with less than 500 employees (Rothwell & Zegveld 1982). In OECD countries, firms with 20 to 99 employees are classified as small and those with 100 to 500 employees as medium enterprises (OECD 2017).

On the contrary, in developing countries, including those in sub-Saharan Africa, SMEs may be defined as firms comprising one to 100 employees (Muriithi 2017). According to the World Bank Enterprise Surveys (WBES), small firms consist of five to 19 employees, medium firms consist of 20 to 99 employees, and large-sized firms consist of 100 or more employees (World Bank Enterprise Surveys 2020). For purposes of a working definition, this chapter will follow the WBES criteria in defining an SME. Therefore, an SME will be defined as a firm of five to 99 employees.

From their inception, SMEs experience many entrepreneurial challenges that disadvantage them compared to large firms. Restricted access to finance, inadequate managerial capabilities, lack of absorptive capacity for technology diffusion, limited access to highly skilled labour and the ability to sustain it, difficulty in acquiring government support, stiff competition, high transaction costs due to information asymmetry and a high-risk profile which tends to subject them to bankruptcy during financial distress, are some of the many problems that SMEs face in the various stages of their development (Elseoud *et al.* 2019; Akinyemi & Adejumo 2017; Crick *et al.* 2018; Ardic *et al.* 2012). In addition, SMEs find it cumbersome to access foreign markets, identify international business opportunities and cope with progressively complex and dynamic international business practices and standards(Paul *et al.* 2017; Kuzmisin & Kuzmisinova 2016; Stainbank & Tafuh 2011).

Although SMEs generally experience various issues throughout their growth, the severity, length, and probability of the challenges experienced differ from country to country. SMEs in developing countries are more likely to face poor infrastructure, lack of managerial capabilities, inadequate and unfavour-able government support, poor electricity supply, increased competition, high interest rates, high inflation rates, corruption and low patronage compared to their counterparts in developed nations and emerging markets (Ocloo *et al.* 2014; Cant & Wiid 2013; Muriithi 2017; Wang 2016). On the contrary, SMEs in developed and emerging countries may tend to experience problems relating particularly to their exports, for example, limited knowledge of foreign markets, barriers in language and culture, tariffs and non-tariff measures and limited funding for their exports (Matlay *et al.* 2006; Mah 2018). However, a universal problem experienced by SMEs and more likely so in African countries, is inadequate access to finance. Based on the underlying assumptions of both pecking order and trade-off theories, SMEs are largely challenged by access to finance due to information asymmetries and high agency costs that accrue mainly to small firms. According to López-Gracia and Sogorb-Mira (2008), the constraint of accessing finance renders SMEs more likely to depend on internal funds and less on debt when making their financing decisions. It raises the possibility that SMEs' behaviour in capital structure decisions may be attributed to their limitations in acquiring finance.

SMEs are essential to the growth and development of economies. In this chapter, the authors explore the possible link between finance and SME development by examining the behaviour of SMEs in capital structure

decisions. Thus, the main objective of this chapter is to test the pecking order theory in the field of SMEs, considering the importance of multiple determinants in the capital structure decisions of SMEs in Africa using a panel data analysis of 2126 firms from 2007 to 2018.

The rest of the chapter is organised as follows. Section 2 explains the pecking order theory and reviews the empirical evidence. Section 3 sets out the conceptual framework of this chapter. The model to be tested and the methodology are presented in Section 4. Section 5 describes the empirical results. Finally, conclusions are presented in Section 6.

2 The Pecking Order Theory: Theoretical Base and Empirical Evidence

2.1 Theoretical Base

The pecking order theory of capital structure suggests that corporate managers will follow a hierarchy when choosing an optimal funding source for financing their projects, where they will opt for the cheapest alternative before considering other alternatives in cases where it is necessary. In this case, firm managers will first opt for retained earnings with the lowest level of risk for their financing needs. They will consider issuing debt and hybrid securities before issuing equity, which is considered the highest risk. The seminal work of Myers (1984), followed by Myers and Majluf (1984), which publicised the pecking order hypothesis of capital structure, illustrates the pecking order behaviour of firms concerning capital structure as occurring due to adverse selection problems of asymmetric information between firm managers and investors. Firm managers have more information regarding the firm's value and investment opportunities than investors do and will act to maximise the intrinsic value of the shares of existing shareholders if there is a need to raise funds for a valuable investment opportunity.

Consequently, the information asymmetry between managers and investors will result in a cost to the firm, described as the underinvestment problem by Myers (1984). The underinvestment problem occurs when managers choose to forgo a positive investment opportunity to maximise the share value of existing shareholders rather than issue out undervalued shares, which will benefit new shareholders. The underinvestment problem is therefore avoided if sufficient internally generated funds to fund investment opportunities exist.

The cost associated with the adverse selection lies in the likelihood that the firm manager will choose not to issue shares and, in turn, forgo a beneficial investment opportunity rather than sell shares at a value that is below their true value. Therefore, if a firm can raise and retain sufficient funds internally to cover the investment opportunity costs, the costs associated with the adverse selection can be avoided. Moreover, if securities must be issued to finance an investment opportunity, the advantage of issuing debt over equity is that investors will perceive large levels of debt as an indication of higher quality of firm shares because firms issuing out large levels of debt have lower marginal expected bankruptcy costs than firms that issue large levels of equity (Ross 1977).

In addition to the costs of adverse selection, taxation and transaction costs also influence how firms make decisions concerning their capital structures according to the pecking order hypothesis. According to Baskin (1989), holding the amount of debt and investment constant, increasing equity shares will necessarily give rise to higher dividend pay-outs, resulting in high taxes. In addition to taxes, transaction costs of issuing new equity tend to attract commissions equivalent to up to 50% of the actual funds raised from issuing equity, making costs related to issuing equity much higher than those accrued for debt.

Concerning the capital structure of SMEs, the theoretical considerations of information asymmetries and agency costs are of particular importance (Mateev & Ivanov 2011). Bharath *et al.* (2008) suggest that for the pecking order theory of capital structure to be economically and statistically underpinned, the assumption of adverse selection, which arises from information asymmetry between managers and investors or shareholders and investors, should be made. Moreover, Daskalakis and Psillaki (2008) point out that small firms are more likely to follow a pecking order when faced with various financing options, as they borrow per their investment requirements and not so much to achieve an optimal debt-to-equity target as suggested by the opposing trade-off theory. On the contrary, Hogan *et al.* (2017) postulate that a theory - practice gap exists when examining the capital structure of small high-technology firms, where the assumption of information asymmetry that should drive firms to prefer debt over equity fails to hold. In this case, small high-technology firms rely more on external equity than debt as a funding option. Hogan *et al.* (2017) argue that if the owners' perception of information asymmetries widens for this particular set of SMEs, the larger will be the expected use of external equity for the firm.

2.2 Empirical Evidence

Various authors have tested the empirical implications of the pecking order theory with mixed results. In a panel survey of British SMEs, Watson and Wilson (2002) found evidence supporting the pecking order hypothesis. The authors found that the predictions of the pecking order model are quite strong and especially evident amongst SMEs that have shared interests between shareholders and managers. They also found the likelihood of a pecking order within different debt types.

Shyam-Sunder and Myers (1999) and Frank and Goyal (2003) examined how firms finance their flow of funds deficits. The former authors found evidence to support the pecking order theory, and the latter found evidence of a target debt ratio.

On the other hand, Frank and Goyal (2007b) found no evidence to illustrate the strength of either the pecking order theory or the trade-off theory in exclusively accounting for all 'stylised facts' depicted in both models. Adair and Adaskou (2015) also review the relationship between capital structure determinants and capital structure decisions of 2370 French SMEs by testing the pecking order and trade-off theories. Their findings, like Frank and Goyal (2007), show inconclusive evidence in support of either theory, especially where the size and age of the firm are concerned. However, regarding profitability and growth opportunities offered to SMEs, evidence was found in support of the pecking order theory.

Cassar and Holmes (2003) and López-Gracia and Sogorb-Mira's (2008) studies also test the pecking order theory. Both found that the pecking order hypothesis can explain the capital structure of SMEs, with size, age, asset structure, profitability and growth opportunities being statistically significant as key factors of capital structure. However, Cassar and Holmes (2003) found the size to have a weak influence over SMEs' capital structure.

Further López-Gracia and Sogorb-Mira (2008), using panel analysis, tested both the trade-off and pecking order theories on a large sample of Spanish SME firms over ten years. They found that both theories help explain the capital structure behaviour of SMEs to an extent. Their results point to firms following a definite pecking order in their financing strategies. However, evidence shows that firms that set a debt ratio target are accorded more trust, even if the period taken to achieve the target may be prolonged. In addition, López-Gracia and Sogorb-Mira (2008) found that although SMEs do follow a pecking order in determining their level of debt, those that aim to reach an optimal target,

as postulated by the trade-off hypothesis, tend to receive greater trust amongst creditors. On the contrary, other studies found evidence of the dominance of the pecking order hypothesis in explaining capital structure decisions of SMEs (Swinnen *et al.* 2005; Serrasqueiro *et al.* 2011; Degryse *et al.* 2012).

More recent studies, such as Bhama *et al.* (2016), comparing poor firms with well-off firms, also found evidence of the pecking order behaviour for firms considered poor but with limited evidence for well-off firms. In addition, their results show that poor firms tend to borrow to finance their operations but keep their debt ratio in check, which indicates pecking order tendencies. Yuli-anto *et al.* (2016), on the other hand, test the pecking order and trade-off theories on a sample of 16 Indonesian manufacturing firms by first identifying and sepa-rating the variables that influence capital structure according to each theory. Their results also found evidence in support of the pecking order theory.

Similarly, Matias and Serrasqueiro (2017) test the two competing capital structure theories on a sample of Portuguese SMEs and found evidence support-ing pecking order and trade-off theories. In particular, Matias and Serrasqueiro (2017) found that older and more profitable SMEs tend to use less debt, which points toward the pecking order theory, which suggests firms with sufficient internal funds will prefer that option over debt. In addition, they found evidence supporting the relationship between firm size and debt in both pecking order and trade-off theories.

The studies that have concentrated on SMEs in testing capital structure theories have largely found evidence in support of the pecking order hypothesis (Cassar & Holmes 2003; Swinnen *et al.* 2005; López-Gracia & Sogorb-Mir 2008; Degryse *et al.* 2012; Adair & Adaskou 2015; Matias & Serrasqueiro 2017). Daskalakis and Psillaki (2008) suggest that SMEs are more likely to exhibit pecking order behaviour because they tend to borrow as needs arise rather than set target debt levels, as the trade-off hypothesis postulates.

Lastly, in a review of the literature concerning the determinants of capital structure, Kumar *et al.* (2017) noted that the pecking order hypothesis tends to perform best theoretically and empirically in explaining the capital structure decisions of firms.

3 Conceptual Framework: Testing the Pecking Order Theory of Capital Structure on SMEs

As the literature outlines, evidence of the trade-off and pecking order theories

of capital structure exists with mixed results. Moreover, these results are most pertinent to large firms, with few studies focussing on the capital structure decisions of SMEs. In instances where the focus has been on SMEs, evidence has largely been found supporting the pecking order hypothesis (Abor & Biekpe 2009; Kuruppu & Azeez 2016; Matias & Serrasqueiro 2017). Even so, given different SME settings, the pecking order hypothesis may lead to ambiguity in results. It is, therefore, paramount to consider the pecking order hypothesis being tested over and above the inherent problems of SMEs and contexts. Hence this chapter, is testing the pecking order theory of SMEs and, where data permits, the case of African countries involved in the global value chain networks.

Based on preceding works, the pecking order hypothesis is generally tested by regressing firm characteristics hypothesised to influence capital structure decisions of a firm on the firm's short-term and long-term debt ratios. Recently, empirical work has incorporated and shown other factors such as industry characteristics (Degryse *et al.* 2012; Li & Islam 2019); country-level characteristics (De Jong *et al.* 2008; El Bahsh *et al.* 2018); cross-country characteristics (Bancel & Mittoo 2004; Desai *et al.* 2004); managerial attributes (Sheikh & Wang 2011; Hu & Liu 2015); and time (Drobetz *et al.* 2006) to be significant determinants of firm capital structure. Related studies (Kayo & Kimura 2011; Jõeveer 2013) have illustrated the importance of including a combination of various factors in a single model when testing for the determinants of capital structure to evaluate the explanatory power of the various determinants in accounting for large variations in leverage within the model.

Kumar and Rao (2015) propose a conceptual framework for identifying the preferred funding options of SMEs. Firm-specific characteristics, manager attributes, and sources of finance form part of the critical factors affecting the choice of finance of managers, as outlined in Kumar and Rao's proposed conceptual framework. Retained earnings, debt finance (consisting of short-term and long-term debt), equity, and other forms of finance constitute funding options available to SMEs. Firm-specific characteristics commonly affecting the capital structure decisions of SMEs include age, size, profitability, growth, and asset structure. Manager attributes have internal features (aversion to risk; aversion to change; growth strategies) and external characteristics (gender; age; education; experience; ownership). According to Kumar and Rao (2015), because SMEs face numerous obstacles in accessing finance, the sources of finance that focus on the features of the type of finance available to SMEs are

crucial in determining their finance preferences. The types of finance include formal sources (banks; equity; venture capital) and informal sources (love capital from family and friends; social capital acquired through social networks; angel investors who invest in the business due to its potential).

Adapting the conceptual framework suggested by Kumar and Rao (2015), preference for SME funding is influenced by firm-specific characteristics (age, size, profitability, growth, asset structure); managers' external attributes (experience); and sources of finance (formal and informal). In addition, the preference for SME funding, which demonstrates how the firm's capital is structured, gives rise to the firm's debt-to-equity ratio, the model's dependent variable to be estimated. The explanatory variables comprise firm-specific characteristics, the manager's external attributes and sources of finance. The dependent variable, the debt-to-equity ratio, is measured by a firm's total debt divided by its market value of assets. The firm's age is determined by the year a particular firm formally began operations. The firm's size is determined by the number of employees working or by the logarithm of sales. Profitability is determined by the level of retained earnings of the firm; growth is determined by the firm's investment in research and development activities or by the growth in sales, and asset structure is measured by the ratio of fixed assets to total assets or the level of collateral pledged by the firm. Managerial experience is measured by the top manager's years of experience in the industry. Access to finance is determined by the level of difficulty in acquiring funding from formal and informal sources.

4 Model and Methodology

This chapter uses the World Bank Enterprise Surveys (WBES) database between 2007 and 2018. SMEs are selected based on the WBES classification. According to this classification, a firm is considered an SME when it meets the criteria of 5-99 full-time employees. Given that there are restrictions in data, especially for African firms that are for a limited number of years, thus, in selecting the SMEs in Africa, this chapter has three-panel data groups: Panel A (2007 – 2013); Panel B (2009 – 2016) and Panel C (2013 – 2018). Kenya, Zambia, and Ghana comprise Panel A; Cameroon, Benin, Cote d'Ivoire, and Togo comprise Panel B; and Kenya comprises Panel C. The authors surveyed 2126 SMEs in seven African countries in this chapter.

Following the earlier works of Abor and Biekpe (2009), in its general form, the model to be estimated is as follows:

$$Y_{it} = X_{it}\beta + \alpha_i + \mu_{it} \qquad (1)$$

Where Y_{it} represents the dependent variable (debt ratio) of each firm $_i$ at time period $_t$. X_{it} represents the firm level and managerial factors known to affect capital structure according to the pecking order hypothesis, whilst β represents the coefficient on each independent variable. α_i represents all unobserved time-invariant characteristics of firms and μ_{it} is the error term.

More specifically, the model the study uses is expressed as follows:

$$TDR_{it} = AGE_{it} + SIZE_{it} + PROFIT_{it} + GROWTH_{it} + ASSET_{it} + EXP_{it} + FACCESS_{it} + \alpha_i + \mu_{it} \qquad (2)$$

The firm's dependent variable total debt ratio (TDR), measures the riskiness of the capital structure. The TDR is the percentage of retained earnings used to finance working capital.

The independent variables of the model are based on prior studies (Abor & Biekpe 2009; Mateev & Ivanov 2011) and include the number of years the firm has been in operation (AGE); the firm turnover measures the size of the firm (SIZE); the profit return on assets (PROFIT) is the ratio of net income to total assets; the growth (GROWTH) variable is measured as the growth in sales; the asset structure (ASSET) is determined by the ratio of fixed to total assets; managerial experience (EXP) is taken as the top manager's years of experience in the industry; access to finance (FACCESS) is a dummy variable that and takes on the value 1 if the firm has access to formal and informal sources of finance, and 0 otherwise.

The study uses panel data methodology to test the pecking order theory and the importance of multiple determinants in the capital structure decisions of SMEs. The preferred method used in this study is the fixed effect (FE) estimation technique based on the results of the Hausman test, not rejecting the null hypothesis at the 1% significance level.

5 Empirical Results

The regression results are presented in Table 1 below. Firstly, the estimated results indicate that the firm's age is a significant determinant of capital

structure for firms in six out of seven countries. Also, the results show a negative and significant association between firms' age and capital structure. Therefore, this implies that the older firms provide more experience and have more time to accumulate funds (Myers 1984; Abor & Biekpe 2009). Also, according to Serrasqueiro *et al.* (2011), this can contribute to increased creditworthiness and reduced recourse to debt in small and medium-sized enterprises. This behaviour is in line with the pecking order approach.

Regarding the size variable, there is a positive and statistically significant relationship between the firm's size and capital structure in five countries: Kenya, Zambia, Benin, Cameroon, and Cote d'Ivoire (at a 10% significance level). Such findings support prior studies (Mira 2005; Nguyen & Ramachandran 2006; Mateer & Ivanov 2011) and align with the pecking order hypothesis. According to the pecking order hypothesis, there is a clear hierarchical means of funding operations, and given SMEs' smaller size and associated higher risk levels, credit is difficult. Thus, smaller-sized firms can use internal funding before considering debt or equity.

Next, this study finds that the firm's growth is negatively associated with the capital structure of the firm. According to Myers (1977), firms with higher growth opportunities tend to have less debt, given that the amount desired to finance growth opportunities cannot be collateralised. In addition, the agency costs between shareholders and debtholders tend to be heightened for firms with higher growth opportunities (Titman & Wessels 1988). This negative relationship between growth and capital structure is also significant for SMEs in Kenya, Togo, Cameroon, and Cote d'Ivoire. Therefore, this means that higher growth is associated with lesser debt. However, it is interesting to note evidence of a positive and statistically significant relation regarding SMEs in Zambia at a 5% significance level. Thus, this implies that larger debt is associated with higher growth in Zambia, which is inconsistent with the pecking order approach.

Regarding the profit return on assets, a negative and significant correlation was found between profitability and capital structure for Ghana, Cameroon, Cote d'Ivoire, and Togo firms. Profitable firms funded their operations with internal funding and less debt. Therefore, this aligns with the pecking order hypothesis, which suggests that firms with sufficient funds will not aim to reach an optimal debt target. Instead, they will follow a hierarchy where they will utilise retained earnings and rely less on external funding. These findings also adhere to prior studies (Allen 1993; Sheikh & Wang 2011; Oboh

et al. 2013; Kadongo *et al.* 2015).

As to the asset structure variable, which includes categories such as land and buildings, equipment, personal assets and other assets, the results indicate that in panel A in all three countries (Ghana, Kenya, Zambia), land and buildings were mostly used as collateral for debt, followed by other assets and equipment. Firms in panel B namely Benin and Cote d'Ivoire, seem to favour equipment as the collateral for debt, followed by personal assets, other assets, and finally, land and buildings. In panel C, firms in Kenya used land and buildings, personal assets, and other assets as collateral towards their debt. Generally, it seems that firms in all three panels that used land and buildings, equipment, personal assets, and other assets instead of accounts receivable as collateral for debt were less likely to fund their operations with retained earnings and more likely to issue debt. This positive relationship between asset structure and capital structure has previously been found by Rajan and Zingales (1995), Chen (2004) and Serrasqueiro and Rogão (2009). According to Scott (1976), firms that want to optimise their debt targets will issue as much secured debt as possible to avoid agency costs arising from conflicts between shareholders and debtholders. However, firms in Kenya (panel A) that used equipment compared to accounts receivable as debt security and SMEs in Cameroon (panel B) that used land and buildings compared to accounts receivable as debt security were more likely to fund their working capital with retained earnings and less likely to issue debt. This negative relationship between asset structure and capital structure may arise when firms prefer to hold a large share of tangible assets and retain a substantial portion of their earnings as funding.

Regarding access to finance, the estimated results indicate a statistically significant and positive link between finance access and firms' capital structure in all countries except for Benin. The expectation is that firms with easy access to finance will be encouraged to use the facility, potentially leading them to rely more extensively on debt financing. Consequently, firms may use much less retained earnings to finance their investments. Such behaviour, however, does not align with the pecking order theory.

Lastly, evidence regarding managerial experience on capital structure reveals insignificant diverse findings in the top managers' experience that can be positively or negatively related to capital structure. If the results are positive, this implies that as top managers' experience increases, the debt ratios may increase and vice versa on negative findings.

Table 1: Pecking Order Theory - Determinants of Capital Structure (SMEs 2007-2018)

Independent Variables	Panel A: SMEs (2007-2013)			Panel B:SMEs (2009-2016)				Panel C:SMEs (2013-2018)
Dependent variable : Capital Structure (TDR)								
	Ghana	Kenya	Zambia	Benin	Cameroon	Cote d'Ivoire	Togo	Kenya
AGE	0.213	0.010***	-0.304	-1.019***	-0.005	0.005	0.018***	0.009***
	(0.436)	(0.001)	(0.218)	(0.374)	(0.005)	(0.242)	(0.001)	(0.001)
SIZE	0.012	-0.817***	-1.344***	-6.359***	-1.672***	-2.555*	-0.509	-1.065
	(0.129)	(0.025)	(0.479)	(1.886)	(0.502)	(1.387)	(2.789)	(0.681)
GROWTH	0.348	1.143*	-1.389**	-1.277	2.071***	1.931***	6.148***	1.372*
	(0.722)	(0.651)	(0.543)	(1.429)	(0.504)	(0.540)	(1.577)	(0.801)
PROFIT	19.127***	20.069***	32.441*	1.764	40.473***	27.685***	25.613**	27.075***
	(4.374)	(17.302)	(18.604)	(15.359)	(4.619)	(3.309)	(12.292)	(9.753)
LAND ASSET	-10.042***	-10.767***	-27.780***	-8.570	12.896***	24.894	-3.431	-4.683***
	(3.334)	(1.906)	(0.101)	(20.390)	(1.676)	(16.807)	(17.691)	(1.580)
EQUIP ASSET	6.572	22.267***	-6.202	-44.031***	8.331	-9.069***	-13.896	12.797*
	(7.210)	(2.550)	(4.875)	(11.791)	(16.474)	(0.220)	(8.699)	(7.393)
PERSONAL ASSET	-7.570	-0.116	1.426	11.142	-18.660***	-15.193***	-5.228	-12.771
	(13.481)	(1.724)	(5.256)	(13.879)	(4.352)	(2.243)	(8.541)	(11.654)
OTHER ASSETS	-23.664***	-5.911***	-3.728	2.753	6.030	-18.672***	-22.762	-7.951
	(2.395)	(1.530)	(2.848)	(7.490)	(8.854)	(2.854)	(33.369)	(5.061)
FACCESS	-16.846***	-21.510***	8.879***	-11.102	-25.769***	-23.856***	-24.185***	-16.092***
	(0.089)	(4.762)	(3.340)	(9.093)	(3.163)	(8.208)	(0.593)	(3.889)
EXP	-0.354	-0.151	0.373	-0.004	0.313	0.057	0.004	-0.224
	(0.283)	(0.182)	(0.424)	(0.665)	(0.519)	(0.571)	(0.289)	(0.163)
CONS	58.800***	67.165***	77.455***	215.270***	49.069**	97.362***	70.110	71.103**
	(2.461)	(20.893)	(3.662)	(28.993)	(22.616)	(19.469)	(63.949)	(30.040)
R Squared	0.220	0.286	0.240	0.446	0.347	0.283	0.365	0.229
No of Obs	417	454	319	74	212	135	84	431

Standard deviations in parenthesis

*** statistical significance at the 1% level; ** statistical significance at the 5% level; * statistical significance

Evidence of a positive association between managerial experience and a firm's capital structure has been reported by Frank and Goyal (2007a) and

Borgia and Newman (2012). However, studies that found evidence of a negative relationship between managerial experience and a firm's capital structure include Colombo and Grilli (2007), Coleman and Robb (2012) and Mangafić and Martinović (2015). In this study, none of the estimated results are statistically significant, thus indicating that top managers' experience in African countries is not a major determinant of SMEs' capital structure.

6 Conclusion

Previous studies have extensively reviewed firms' capital structure in general and SMEs in the context of the pecking order hypothesis, with mixed results. However, little is known about the capital structure of SMEs in Africa despite the considerable and rising importance of SMEs in African economies. Therefore, the objective of this study is to test the pecking order hypothesis of capital structure on SMEs in Africa and to explore the importance of several factors in SMEs' capital structure decisions using a panel data analysis of 2126 firms from 2007 - 2018.

The results emanating from this study suggest that the pecking order hypothesis generally explains the capital structure of SMEs in all three panels. Age, size, profitability, firm growth, and asset structure are statistically significant key determinants of capital structure, whilst managerial experience is found to not influence the capital structure of SMEs in general. In addition, although not traditionally considered a key determinant of capital structure within the literature, access to finance is statistically significant in determining capital structure for SMEs. Additionally, the findings of this chapter reveal that profitability and access to finance are very important in determining SMEs' financing policies since they have the greatest impact on the capital structure of SMEs.

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