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Does Pecking Order Theory Hold Among Kenyan Firms?

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Abstract

This study examined the pecking order theory of capital structure through annual data of 37 firms listed at the Nairobi Securities Exchange for the period 2011-2016. Estimation results established a positive relationship between changes in debt and investments and a negative relationship between changes in debt and cash flows. Overall, the findings suggest that financial deficits determine net debt issues and hence a strong case for pecking order theory in Kenya in explaining capital structure decisions.

Keywords: Pecking Order Theory, Capital structure; Financing deficit, Panel Data

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1. Introduction

According to the pecking order theory (POT), firms prefer internal sources of finance to external sources of finances (Myers, 1984). This is mainly because internal sources of finance are less prone to costs of information asymmetry unlike the external sources of finance. Hence, firms opt for retained earnings first to finance their operations. If the retained earnings are insufficient, then firms borrow to bridge the deficit. In the event that deficit persists, firms then issue equity to raise funds as the last resort. Put differently, there exists a hierarchy of financing business operations.

Empirical evidence on POT finds contrasting results, which emanates from different statistical powers (Leary & Roberts, 2004). Studies by Rajan and Zingales (1995), Titman and Wessles (1988), and Fama and French (2002) established a negative relationship between profitability.

Using a simple regression model, Shyam-Sunders and Myers (1999) concluded that POT provides a good way of examining financial structure behavior. But these findings were rebutted by Chirinko and Singha (2000) who showed that the hypothesis used by Shyam-Sunders and Myers (1999) suffered from statistical power problems that may have invalidated their inferences. Frank and Goyal (2003) highlighted that Shyam-Sunders and Myers' model showed that POT fails for small firms. However, Fama and French (2003) found that large firms still violate the financing hierarchy. Lemmon and Zender (2003) showed that as long as firms were able to account

for financial slack, then Frank and Goyal hypothesis would hold. Nevertheless, Shyam-Sundars and Myers' model still suffers from statistical power¹ problems.

One important gap in the 'capital structure' strand of literature, which has been less analyzed, is the extent to which Kenyan firms adopt POT in making financing decisions. Studies conducted in Kenya have focused more on factors that determine capital structure in general, financing behaviors and performance across different industries and sectors (see for example (Ngugi, 2008) who investigated POT with reference to Kenyan firms but whose focus was on the influence of profitability on capital structure. This study, therefore, seeks to fill this research gap. Thus, we investigate the extent to which the POT of capital structure provides a satisfactory account of the financing behavior of publicly traded firms over the 2011 to 2016 period.

2. Previous Evidence

Capital structure theory dates back to 1958 with MM's position that the value of a firm is independent of capital structure. In short, the capital structure was irrelevant. This would later change in 1963 when M&M incorporated debt that brought in tax implications and hence affected the value and performance of the firm (Ukaegbu, 2015). Durand (1959) questioned how applicable arbitrage was and termed the assumptions made by M&M as unrealistic. However, as alluded to by Muriu (2016), increasing the use of debt monotonically would result in increased bankruptcy costs and mostly when a firm's profits are low and cyclical. With later evolution of the trade-off proponents, the academic discourse shifted from the static to dynamic trade-off propositions and this provided a foundation for the POT as known today.

The POT theory has been tested under both the developed and developing economies. Some of the studies that have tested this theory include Jiran et al. (2012) who tested the POT in Pakistan using non-financial firms using panel-data regression analysis for the period 2001-2008. They found that firms in Pakistan follow the POT. Matemilola et al. (2012) also tested the trade-off theory against the POT in a nested model-using panel, Generalized Method of Moment (GMM) estimation techniques in South Africa. Results from the GMM indicated that fixed assets and profits are key determinants of capital structure. From the empirical results, it was established that the trade-off theory and POT were compatible in a nested model. Ramjee (2012) using a sample of 178 firms listed with JSE estimated a target adjustment model using a generalized method of moments technique to determine the cost and speed of adjustment towards a target debt ratio. The study found that firms in South Africa follow both the trade-off theory and POT in determining capital structure. Chen and Jung studied how POT explains capital structure in Taiwan. They investigated POT using 305 Taiwan electronic companies quoted in the Taiwan Stock Exchange (TSE) of 2009. They used a hierarchical regression model of estimation. They found that profitability and firm growth rate to be key determinants of capital structure with profitability having a negative relationship with capital structure and growth rate a positive relationship. This study aims to test the POT in the Kenyan firms' context.

Extensive literature has focused on country-specific studies. These include China (), South Africa (Negash, 2002), Zimbabwe, (Green and Mutenheri, 2002) Kenya, (Ngugi, 2008; Nyang'oro, 2003) and Ghana, (Abor and Biekpe, 2005) while some have focused on regions (De jong et al. 2008). These prior studies examined the role of asset tangibility, profitability, firm size and growth, business risk, management composition, tax rate, among others without controlling for other macroeconomic factors such as interest rates.

Large profitable firms have been found to prefer less debt in their financing structure and hence the negative relationship between leverage and profitability (Kester, 1986; Harris and Raviv, 1991; Rajan and Zingales, 1995; Albert and Addie, 2002). The cost gap between internal and external sources of finance explains these preferences (Yegon et. al., 2014). By controlling for debt capacities of the firms, Lemmon and Zender (2008), finds that the POT holds.

¹ Statistical power of a study (sometimes called sensitivity) is how likely the study is to distinguish an actual effect from one of chance. It's the likelihood that the test is correctly rejecting the null hypothesis.

On a similar vein but for Ghanaian firms (Abor 2008) concluded that quoted and unquoted firms had larger debt ratios than the SMEs. This confirms that large firms are likely to use more debt. The study also found that firm size, asset structure, profitability, and management structure are key determinants of capital structure decisions in Ghana.

Studies such as Fama and French (2002), Frank and Goyal (2003), Fama and French (2005), and Leary and Roberts (2007), question the ability of POT to explain financing decisions. Frank and Goyal (2003) for instance allude that the model by Shyam-Sundars and Myers (1999) fails to hold for small-high-growth firms as these firms issue more equity than debt. Fama, French (2005) supported their position, and this contradicts the POT. In Australia, Allen (1991) tested the financial perceptions of the managers on capital structure decisions. Field interviews were conducted on secretaries and senior financial offices for 48 listed firms. The results indicated that firms follow the POT.

There are a few studies in Kenya with a focus on POT. Ngugi's (2008) findings supported a pecking order model that incorporated a speed of adjustment and in the study, non-debt tax shields, asymmetric information, and local capital market infrastructure greatly influenced financing behaviors.

Pettit and Singer (2005) also found that POT was relevant for firms in the manufacturing sector because the cost of internal financing was higher for them than for large firms.

On a related development, Njoroge and Nasieku (2016) investigated the determinants of the capital structure of internet service providers in Kenya. They established that firm growth, the tangibility of assets, profitability and liquidity had a significant effect on levels of leverage. They found the growth of the firm, profitability and asset tangibility to have a positive relationship with leverage while liquidity and size of the firm had a negative relationship with debt. These findings were consistent with Panno (2003), Eriotis et al. (2009), Sheikh, and Wang (2011). Moreover, Sheikh and Wang (2011), Ukaegbu and Oino (2013), found a negative relationship between capital structure and liquidity, which confirmed the postulates of the POT that firms prefer internal financing to external financing while making capital structure decisions.

Firms in South Africa adjust fast towards target debt ratios. Using 178 firms listed on the Johannesburg Stock Exchange (JSE henceforth) for the period 1998-2008, (Ramjee, 2012) established that asset tangibility, growth, size, and risk are positively related to leverage, while profitability and tax are negatively related to capital leverage. Moreover, some firms with a greater proportion of tangible assets had higher debt ratios, while more profitable firms operated at lower levels of leverage, other firms operated at higher levels leverage, and that fast-growing firms prefer debt to equity when raising their capital. The study also found that prefer internal to external sources of finance-to-finance their operations which is consistent with POT in their financial decisions. Using a sample of 49 companies both in industrial and service industries in Kuwait, Gharaibeh (2015) investigated the determinants of capital structure for the period 2009 to 2013. The study results indicated that growth opportunity, firms' age, liquidity, profitability, size, tangibility, and industry type have a statistically significant relationship with the firm's choice of leverage. Moreover, the study established that that firm's age, growth opportunities, liquidity, profitability, firm's size, tangibility, and type of industry are key determinants of capital structure.

While studying the effect of capital structure on the financial performance of Small and Medium Enterprises (henceforth SMEs), Mirie and Birundu (2015) used multiple linear regression and established that capital structure, asset turnover, and tangibility had no significant effect on the financial performance of SMEs.

Inconsistent findings were established by Murray and Vidham (2002) by testing US-listed firms for the period 1971 and 1998 and found that firms actually employed equity more than debt hence contradicting POT which supports Graham (2000).

Frank and Goyal (2003) consider omitting variables that determine leverage while estimating the pecking order model an error. However, this study only focused on the POT model as defined by changes in financial deficit.

Do these initial findings suggest with regard to POT? And in Kenya? What is the knowledge gap and how will this study fill the gap?

However, this study aimed not only at looking at whether the pecking order explains capital structure decisions in Kenya but also used a more current study period 2011-2016 in order to draw valid and current inferences. A lot has changed in the Kenyan financial sector. Key changes included increased financial liberalization and capping of interest rates by the Central Bank of Kenya. Hence, it was interesting to test POT and see if it stood its initial hypothesis. It was also clear that the majority of the studies have conducted descriptive and regression analysis using GMM among other modeling techniques. This study was different and was modeled using Shyam-Sunder and Myer's (1999) model to empirically test pecking other theories for the Kenyan case.

3. Methodology

3.1 Theoretical framework

According to Shyam-Sunder and Myers (1999), firms prefer internal financing first to external finances. Firms use retained earnings first and then debt and equity in that order. This defines a hierarchy of financing in the capital structure. They based their model on two assumptions. First, the existence of an internal financing deficit determined the amount of debt financing a firm opted for. Thus, the internal finance deficit gap determined the amount of debt to fill this gap. Secondly, they assumed that the amount of debt used to fill the internal finance deficit gap should also minimize the costs of information asymmetry. Hence, if POT applies, the optimal level of debt applied is solely due to the existing internal financing deficit.

Moreover, stock markets such as the NSE have so much information asymmetries and this determines the different factors that determine capital structure empirical models adopted by firms (Stiglitz, 1998).

The study focused on testing the validity of the following hypothesis:

H₀: Firms listed with NSE do not follow POT in making the capital structure decisions

H₁: Firms listed with NSE follow POT in making the capital structure decisions

Shyam-Sunders and Myers (1999) came up with a simple regression model. In this model, they believed that the net debt issue (ΔD_{it}) and financial deficit (DEF_{it}) had a positive relationship as illustrated by equation 1, which represents the pecking-order model.

$$\Delta D_{it} = \alpha + \beta_1 DEF_{it} + \varepsilon_{it} \dots \dots \dots (1)$$

Where α and β_1 are constant parameters. Equation 1, β_1 represents the POT coefficient, ε_{it} which is the error term, while the subscripts i and t represent the firm's number and time respectively. For POT to strictly apply $\beta_1 = 1$ and $\alpha = 0$. This implies that the amount of debt issued by a firm is equivalent to the existing deficit gap.

Shyam-Sunders and Myers (1999) alluded that the following simple aggregated model defines the financial deficit (See Khan et al, 2015).

$$DEF_{it} = DIV_{it} + I_{it} + \Delta WC_{it} + R_{it} - CF_{it} = \Delta D_{it} + \Delta E_{it} \dots \dots \dots (2)$$

Where;

DIV_{it} : Cash dividends for firm i in year t

I_{it} : Net investment for firm i in year t (i.e. I_{it} = capital expenditures + increase in investments + acquisitions+ other use of funds – sale of PPE – sale of investments). This referred to as capital expenditure in the existing literature.

ΔWC_{it} : Change in working capital for firm i in year t (ΔWC_{it} = change in operating working capital + change in cash and cash equivalents + change in current debt)

R_{it} : Current portion of long-term debt firm i in year t

CF_{it} : Cash flow after interest and taxes for firm i in year t (CF_{it} = income before extra-ordinary items + depreciation and amortization + extraordinary items and discontinued operations + deferred taxes + equity in net loss – earnings + other funds from operations + gain (loss) from sales of PPE and other investments).

ΔD_{it} : Net debt issued for firm i in year t (ΔD_{it} =long-term debt issuance-long-term debt reduction)

ΔE_{it} : Net equity issued firm i in year t (ΔE_{it} =common stock sales-stock repurchases)

Frank and Goyal (2002) modified equation 2 as follows:

$$DEF_{it} = DIV_{it} + I_{it} + \Delta WC_{it} - CF_{it} = \Delta D_{it} + \Delta E_{it} \dots \dots \dots (3)$$

Where, they omitted the current portion of long-term debt (R_{it}) variable which according to them, had no significant effect on the overall results (Liu, 2013). This represents the disaggregated model.

3.2 Empirical Model

This study used the Shyam-Sunders and Myers (1999) aggregated model to test for POT among firms in Kenya. The simple POT regression model seeks to test if a change in internal financial deficits implies net debt issues and specified as;

$$\Delta D_{it} = \alpha + \beta_1 DEF_{it} + \varepsilon_{it} \dots \dots \dots (4)$$

The model is further augmented to explain the changes in both debt issues and internal financial deficits and specified as;

$$DEF_{it} = DIV_{it} + I_{it} + \Delta WC_{it} - CF_{it} = \Delta D_{it} + \Delta E_{it} \dots \dots \dots (5)$$

Consistent with Gachoki (2005), we compute average internal deficit values for each individual firms as follows;

$$DEF_{it} = \frac{\sum_{i=1}^n DEF_{it}}{n} \dots \dots \dots (6)$$

Computing average net debt issues, we obtain;

$$\Delta D_{it} = \frac{\sum_{i=1}^n \Delta D_{it}}{n} \dots \dots \dots (7)$$

$$\text{Similarly, we can get net equity issues and obtain; } \Delta E_{it} = \frac{\sum_{i=1}^n \Delta E_{it}}{n} \dots \dots \dots (8)$$

Hence, the POT regression model is specified as;

$$\frac{\sum_{i=1}^n \Delta D_{it}}{n} = \alpha + \beta_1 \frac{\sum_{i=1}^n DEF_{it}}{n} + \varepsilon_{it} \dots \dots \dots (9)$$

If POT holds, then $\alpha=0$ and $\beta_1=1$. Since DEF defines ΔD , then equation 10 is specified as;

$$\Delta D_{it} = \alpha + b_1 DIV_{it} + b_2 I_{it} + b_3 \Delta W_{it} - b_4 \Delta C_{it} + \varepsilon_{it} \dots \dots \dots (10)$$

Under the POT, while holding all other factors constant, change in DEF implies a change in ΔD . Therefore,

$$b_1 = b_2 = b_3 = b_4 = 1$$

3.3 Definition and Measurement of Variables

Data were obtained from annual reports, financial and cash flow statements of all firms that consistently traded with NSE for the period 2011-2016.

The dependent variables are ΔD_{it} and DEF_{it} specified as follows;

$$\Delta D_{it} = \alpha + \beta_1 DEF_{it} + \varepsilon_{it} \dots \dots \dots (11)$$

$$DEF_{it} = DIV_{it} + I_{it} + \Delta WC_{it} - CF_{it} = \Delta D_{it} + \Delta E_{it} \dots \dots \dots (12)$$

The dependent variable (ΔD_{it}) represents the net debt issues by a firm. According to POT, ΔD_{it} should change commensurately with changes in internal financial deficit (DEF_{it}) implying that $\alpha=0$ and $\beta_1=1$.

The independent variable (DEF_{it}) represents the internal financial deficit which was derived from published financial statements.

ΔWC_{it} = This represents changes in working capital for firm i in year t and calculated as follows:

ΔWC_{it} = change in operating working capital + change in cash and cash equivalents + change in current debt).

The data was obtained from the balance sheets of each firm.

CF_{it} = This represents the net cash flows after interests and taxes for firm i in year t and are computed as follows;

CF_{it} = income before extra-ordinary items + depreciation and amortization + extraordinary items and discontinued operations + deferred taxes + equity in net loss – earnings + other funds from operations + gain (loss) from sales of PPE and other investments).

Data were obtained from the cash flow statements

ΔE_{it} = This represents the net equity issues for firm i in year t and are computed as follows:

ΔE_{it} = common stock sales - stock repurchases. The data was extracted from the financial statements.

3.4 Econometric Approach

The study employed a panel regression model. This is because panel data has the power to incorporate both the cross-sectional and time-series data especially because data may have variations across the periods (Kinyua and Muriu, 2017). This ensures reduced biases through controlling for the omission of variables.

We estimate the models using fixed effect and random effect models after conducting the Hausman specification test. The fixed-effect model allows variations of the intercepts of each firm while at the same time maintaining constant slopes. The random effect model assumes no correlation between firm-specific traits with explanatory variables (Akinlo, 2011).

3.5 Sources of Data

The study mainly used secondary data. These included annual financial statements, annual financial and cash flow reports for all firms listed and trading with NSE for the period between 2011 and 2016. The data was available at both the NSE and Capital Markets Authority (CMA).

The firms were selected based on the following criteria;

- i. They must have traded with the NSE for the period 2011-2016
- ii. They must have all financial and annual reports deemed necessary for this study
- iii. They must not be highly regulated. Hence all banks were excluded

4. Empirical findings and discussions

4.1 Descriptive statistics

This study used panel data across 8 sectors with a total of 37 firms that translated to 222 observations. Table 1 presents the summary statistics of the variables. It is evident that the mean and standard deviations have large values. This can be explained by the different sizes of the firms and sectors. Take for example Safaricom and Kakuzi. While Safaricom gives high dividends to a pool of shareholders, Kakuzi gives fewer to its small number of shareholders. In addition, while some firms borrow heavily, other firms in the sample borrowed little and hence had a smaller portion of financial deficit. Overall, the data did not have major skewness considering that it focused on variables across 8 sectors of firms listed at NSE.

Table 1: Summary Statistics (KES '000,000)

Variable	Mean	N	SD	Min	Max	P50	Skewness	Kurtosis
DIV	0.00103	222	3320	0	30400	59.2	6	47
I	5.935822	222	18	-0.22707	174	0.600407	6	50
ΔWC	-1.175745	222	14.6	-206	27.6	0.03971	-13	176
CF	1.401251	222	6.747949	-60.1	38.1	0.442224	-3	41
ΔD	2.229184	222	24	-66.4	248	-746	7	65
ΔE	0.545297	222	10.9	-137	47.7	220177	-9	118
DEF	2.774481	222	29.4	-142	296	226004	6	58

Source: Own Computation

Table 2 shows that there exists a strong correlation between changes in net debt and financial deficit which is consistent with Shyam-Sunder and Myers (1999), and the pecking order theory. Hence, the more financial deficit a firm has the more it borrows. It is also worth noting the weak correlation, between changes in debt and equity. This confirms the pecking order model which advocates for the use of equity as the last financing option. This confirms the pecking order position that debt financing does not dominate the size of equity financing adopted by a firm (Frank & Vidham, 2003). On the other hand, we observe weak correlations between deficits and factors determining it. For example, there exists a weak and negative correlation between financial cash flows (CF) and changes in debt (Δ D). This is consistent with the POT (Matemilola., Bany-Ariffin, & Carl, 2012), which posits that firms with higher cash flows employ less debt in their capital structure (Ahmad, Kareem, Mautin, & Sakiru, 2015)

Table 2: Correlation Matrix

	DIV	I	Δ WC	CF	Δ D	Δ E	DEF
DIV	1.000						
I	0.0588	1.000					
Δ WC	-0.01	-0.4678	1.000				
CF	0.6393	0.1886	-0.0669	1.000			
Δ D	0.0138	0.4333	0.0396	-0.0107	1.000		
Δ E	0.1117	-0.1844	0.8378	0.0385	0.3187	1.000	
DEF	0.0528	0.2856	0.3437	0.0056	0.9359	0.6322	1.000

Source: Own Computation from the panel data of firms listed at NSE 2011-2016

4.2 Hausman Specification Test

We also tested the most appropriate model using the Hausman test.

The p-value obtained for the POT model was 0.0013 which was less than 0.05 thus the POT model was analyzed using the fixed effect. Table 4, however, shows that the p-value for the debt model was greater than 0.05 and hence the model was estimated using the random effect model.

Table 3: Hausman tests for the POT Model: $\Delta D_{it} = \alpha + \beta_1 DEF_{it} + \varepsilon_{it}$

Coefficients				
	(b)	(B)	(b-B)	sqrt(diag(V_bV_B))
	Fixed	Random	Difference	S.E
DEF	0.749583	0.765046	-0.0154628	0.0047998

Source: Own Computation from the panel data of firms listed at NSE 2011-2016

Test: Ho: difference in coefficients not systematic

Chi2 (1) = (b-B)'[(V_b-V_B)^(-1)](b-B)=10.38

Prob>chi2 =0.0013.

Table 4: Hausman tests for Debt Model

$$\Delta D_{it} = \alpha + b_1 DIV_{it} + b_2 I_{it} + b_3 \Delta W_{it} - b_4 \Delta C_{it} + \varepsilon_{it}$$

Coefficients				
	(b)	(B)	(b-B)	sqrt(diag(V_bV_B))
	Fixed	Random	Difference	S.E
DIV	0.000438	0.000584	-0.0001465	0.0009883
I	0.890237	0.805408	0.0848297	0.1111168
Δ WC	0.509854	0.515396	-0.0055415	0.0534564
CF	-0.54837	-0.55296	0.0045916	0.2164244

Source: Own Computation from the panel data of firms listed at NSE 2011-2016

Test: Ho: difference in coefficients not systematic

chi2 (4) = (b-B)'[(V_b-V_B)^(-1)](b-B)=0.65

Prob>chi2 = 0.9571

4.3 Estimation Results

Table 5 presents the regression results for POT. For POT to hold, β_1 as specified in equation 4 must be equal to one implying a dollar-to-dollar relationship between changes in debt and financial deficit. Hence, according to the POT model, Kenyan firms do indeed have a strong case in following the POT in their financing evidenced by an almost unit POT coefficient (0.75), β_1 (Sunders and Myers, 1999). However, firms have to make difficult financial capital structure decisions and Kenyan firms are no exception. This can be explained by the fact that retained earnings have no financial obligations as compared to debt and equity, which are highly prone to information asymmetry.

Table 5: Regression results of the Pecking Order Theory

	Random Effects Model		Fixed Effects Model	
	ΔD_{it} POT Model	ΔD_{it} Debt Model	ΔD_{it} POT Model	ΔD_{it} Debt Model
DEF_it	0.7650*** (39.4)	-	0.7496*** (37.48)	-
DIV_it	-	0.0006 (1.07)	-	0.000438 (0.39)
I_it	-	0.8054*** (9.08)	-	0.8902*** (6.26)
ΔWC_{it}	-	0.5154*** (4.78)	-	0.5099*** (4.24)
CF_it	-	-0.5530** (-2.03)	-	-0.5484 (-1.57)
Constant	106579.2 (0.19)	-1771604 (-1.17)	149480.5 (0.26)	-2137401 (-1.07)
R^2	-	0.2769	0.884	0.203
Adjusted R^2	-	-	0.861	0.027
AIC	-	-	7672.1	8160.4
BIC	-	-	7678.9	8177.4
Observations	222	222	222	222

T-statistics in parentheses: *p< 0.10, **p< 0.05, ***p< 0.01

Notes: Where DEF_it is Financial Deficit, DIV_it is Cash dividends for firm i in the year t, I_it is a Net investment for firm i in year t, ΔWC_{it} is Change in working capital for firm i in year t, CF_it is Cash flow after interest and taxes for firm i in year t.

The estimation results reveal that investments and change in working capital are statistically significant in explaining the variation of financial debt in Kenya. This is consistent with findings of studies by Atiyet et.al. (2012) in France and Frank and Goyal (2003) in the USA. This implies that higher levels of investments and correspond to more debt in its capital structure.

In Kenya, this could be explained by the fact that financial accessibility in Kenya is highly liberalized and as long as firms have collateral, then they are able to access credit. Large firms have a collateral advantage and borrow more. This makes them follow the pecking order. This is inconsistent with the initial pecking order position that small firms follow pecking order (Shyam-Sunder and Myers (1999). Our study agrees with Ni and

Yu (2008) who found that large firms in China follow the pecking order while small firms do not.

In addition, POT asserts that if a firm is able to control for its internal flow of funds, investing in fixed assets and working capital should commensurately be matched by one to one increase in the amount of debt issued (Frank & Goyal, 2003; Shyam-Sunder and Myers (1999).

The dividend coefficient is not significant which confirms that dividends are sticky and hence when a firm cuts on dividends, such cuts are not used to finance capital expenditure and therefore, firms result in borrowing (Myers, 1984). The negative relationship between debt and cash flows suggests that if a firm has lots of internal cash flows, then it applies less and less debt. This is consistent with the POT position.

5. Conclusions

Using a sample of 37 firms across 8 sectors, this study sought to investigate the applicability of POT among Kenyan firms. Estimation results demonstrate significant support for the applicability of the pecking order theory among Kenyan firms. A random effect regression model on the financial deficit model showed that investments, working capital, and cash flows significantly explain the number of debt firms employ in their capital structure. The more firms invest the more they are likely to borrow and the more cash flows the firms have, the less likely they are to use debt in the financing models. In addition, the fixed-effect model on the POT model revealed that financial deficit prompts firms in Kenya to borrow while factoring in costs involved. Therefore, we conclude that those firms are aware of the costs of information associated with debt and equity. To cut on such costs, they opt for retained earnings first, followed by debt and finally equity as the last resort source.

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