DETERMINANTS OF CORPORATE CASH HOLDINGS: EVIDENCE FROM PRIVATE MANUFACTURING FIRMS IN KENYA

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Abstract: *Cash is an important requirement to ensure continued operations, yet excessive cash holdings might result in many problems which include; higher opportunity costs of holding cash, cash abuse, a tool for obtaining the controlled self-interests and the higher agency costs. The study established that there is a negative and insignificant linear relationship between growth opportunities and corporate cash holdings. The study also revealed that leverage is a significant positive determinant of corporate cash holdings in line with the precautionary motive. In regard to firm size, the study findings indicate that firm size positively determines corporate cash holding. Further, the study revealed that there is a negative linear relationship between likelihood of financial distress and cash holdings. The findings also confirmed a positive relationship between cash flow variability and corporate cash holdings. The study therefore concludes that; leverage, firm size, likelihood of financial distress and cash flow variability determine corporate cash holdings among private manufacturing firms in Kenya.*

Keywords: *Cash holdings, growth* opportunities, leverage, firm size, financial distress, cash flow variability

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1. INTRODUCTION

The firms cash holdings literature has only steadily been developed in recent years and the comprehensive picture of the determinants on cash holdings has yet to be established (Martínez-Carrascal, 2010). In a world of growing capital costs and the related significance of opportunity cost of having surplus cash, liquid assets have become a key focus on a firm's statement of financial position in the optimum capital apportionment problem (Pettit, 2007). Indeed, similar companies with significantly different cash levels can be observed, demonstrating that optimal cash holdings are dependent on many factors. However, corporate chiefs and practitioners incline to make their decisions concerning financial policy and capital structure with only little attention to financial theory (Pettit, 2007).

The decision-making of cash holdings is a primary concern in the companies' management. This is closely related with the companies' daily operations, investment, the behaviors of financing and dividend payments and other activities (Byoun, 2011). Specifically, cash is the companies' most liquid assets and also an important requirement to ensure continued operations. As such, the companies have to determine the most appropriate level of cash holdings to improve their operating efficiency. Baum et al. (2006) study of the impact of macroeconomic variability on cash holdings indicated that managers are more conservative in volatile macroeconomic conditions, and therefore increase firms' cash holding and vice versa. Thus, they describe a negative interplay between economic uncertainty and cash holding. It is notable that more recent studies in the literature have focused on firm specific features rather than external factors as an influence on cash holdings levels. However, what factors affect the companies' cash holdings is not yet clear. Therefore, the study of the determinants of companies' cash holdings is very necessary.

Bigelli and Sanchez-Vidal (2012) decry the paucity of empirical literature on private firms and their cash holding policy. Nonetheless, Bigelli and Sanchez-Vidal (2012) investigate the cash holding characteristics of a sample of Italian private firms between the years 1996 and 2005. The authors show that the average cash holding ratio is about 10%. Particularly, private firms are interesting because unlike public listed firms, equity agency costs are not as prominent in the former as in the latter. On the other hand, the opposite is true for debt agency costs since monitoring tends to be more expensive for private firms (Ang, 1991). Furthermore, information asymmetries are prevalent in private companies, first, because

private companies do not benefit from a public price to mirror investor information, second, because they are not principal targets of analyst research, and lastly, because disclosures provided to investors are limited (Mantecon, 2008).

Higher debt agency costs in private firms besides information asymmetries result in financial constraints. Acharya*et al.* (2013) contend that financially distressed firms use excess cash flows to reduce debt. Additionally, these firms show a positive cash flow sensitivity of cash. As result, extant literature anticipates that private firms are likely to stockpile more cash than public firms. However, these arguments have only been supported for public and not private firms since the type of constraints experienced by private firms differ from the ones experienced by public firms and are much more difficult to determine (Bigelli& Sanchez-Vidal, 2012). According to Daher (2010), private firms tend to be smaller in size than public listed companies, have less investment opportunities and are more financially constrained, and hence are likely to hold more cash. However, several studies have tried to explain cash holdings by agency theory. Using the agency explanation for cash holdings, García-Teruel and Martínez-Solano (2008) argue that private firms retain lower amount of cash than public firms. Taken together, the recent statistics coupled with the empirical evidence have underscored the need for additional thought on corporate cash holdings. The bedrock of this study is to explain the cash holding behaviour of private firms.

2. LITERATURE REVIEW

2.1 Theoretical Review

Corporate finance researchers suggest three theoretical models that can help identify which firm characteristics determine corporate cash holdings decisions. Thus, the determinants of corporate cash holding have been a subject of explanation in the framework of: the trade-off theory, financial hierarchy theory and free cash flow theory.

2.1.1 Trade-Off Theory

The literature on trade-off model about cash explicitly applied to companies is usually traced back to Tobin (1956), and Miller and Orr (1966). According to the trade-off theory, firms set their optimal cash levels by comparing marginal benefits against marginal costs of holding cash (Opler et al., 1999; Ferreira &Vilela, 2004; Afza and Adnan, 2007). As such, the cash holdings are keenly managed with the view of deriving their full benefits. The prime benefit of cash holdings is that it constitutes a safety buffer which permits firms to evade

the costs of raising external funds or liquidating existing assets to finance their growth opportunities (Faulkender& Wang, 2006; Fresard, 2010). Ogundipe et al. (2012) point out that retaining insufficient cash induces firms to abandon projects with positive NPV or to seek abnormally expensive sources of finance. with support abnormally high costs of financing. The main cost experienced by holding cash is the opportunity cost of the capital invested in liquid assets (Ferreira and Vilela, 2004). Additionally, Saddour (2006) conjectures that the costs associated to cash holdings depend on whether managers work to maximize investors' wealth or not. On the other hand, if managers don't maximize shareholders' value, they instead stockpile cash to increase assets under their purview so as to gain managerial discretion (Han &Qiu, 2007). As a result, the cost of cash holdings will escalate and include the agency cost of managerial discretion.

2.1.2 The Financial Hierarchy Theory

The financial hierarchy (or pecking order) model was first developed by Donaldson (1961) and then extended by Myers and Majluf (1984). This model presents a different way of looking at investment decisions by considering how the investment is financed. The financial hierarchy theory asserts that to minimize asymmetric information costs and other financing costs, firms should finance investments first with retained earnings, then with safe debt and risky debt, and finally with equity (Myers & Majluf, 1984). This theory suggests that firms do not have target cash levels, but cash is used as a buffer between retained earnings and investment needs. Thus, the motive for holding cash is to avoid external financing. Consequently, when retained earnings are inadequate to finance new investments, firms use their cash holdings and then issue new debt and finally when they get out of their debt servicing capacity they will issue securities. As such, the cash level would just be the result of the financing and investment decisions, and therefore debt and cash are viewed as opposite sides of the same coin (Dittmar et al., 2003; Saddour, 2006). Thus, when resources are adequate and surpass the amount required for investments, the firm will pay dividends, pay debt when it becomes due, and will otherwise accumulate cash (Opler et al., 1999; Dittmar et al., 2003). Accordingly, cash holdings follow an inverse pattern over time, that is cash decreases when investments exceed retained earnings, and vice versa.

2.1.3 The Free Cash Flow Theory

The free cash flow theory was advanced by Jensen (1986). This theory deals with the relationship of the investors (who delegate authority) and the managers (agents) who have to perform the duties delegated to them. Jensen (1986) contends that managers have an incentive to build up cash to increase the amount of assets under their control and to gain discretionary power over the firm investment decision. The availability of cash therefore, permits management to make investments that the financial markets would not be willing to finance. Furthermore, Fama and Jensen (1983) proclaim that managers are risk averse and are not fully diversified and therefore more entrenched managers hold surplus cash to avoid market discipline. Ferreira and Vilela (2004) are of the opinion that cash reduces the pressure to perform well and allows managers to invest in projects that best suit their own interests, but may not be in the shareholders' best interest. Accordingly, corporate cash holdings are viewed as free cash flows since they can be used by managers to serve their own interests at the expense of shareholders', thus escalating the conflicts of interest between the two parties (Jensen, 1986; Harford, 1999). Nevertheless, a firm's cash-holding policy is a subject of managerial discretion, and therefore the level of cash holdings raises concerns when managers do not act in the best interests of shareholders. Therefore, cash holdings are considered as risk-free investments and hence a risk-averse manager would increase cash retention to reduce the firm's risk exposure then giving up positive risky NPV projects (Tong, 2006).

2.2 Motives for Holding Cash

The level of corporate cash holdings can as well be explained by the motives for holding cash in addition to the theories, as stated by Keynes (1936): the cash buffer for precaution, the reduction of transaction costs and the cash allowance for speculation. Recently, tax implication has also emerged as a motive for holding cash by firms.

2.2.1 Transaction Motive

The transaction motive emphasizes that the main advantage of holding cash is that the firm can lower its transaction costs by using its cash to make payments rather than liquidating assets. Consequently, firms will hold more cash when it is likely to incur higher transactions costs to convert non-cash assets to cash. On the other hand, firms will tend to hold lower

amount of cash when the opportunity costs of cash retention are greater (Baumol, 1952; Miller & Orr, 1966; Bates et al., 2009).

2.2.2 Precautionary Motive

The proponents of precautionary motive contend that firms hold cash as a shield against future cash shortfalls and finance their positive NPV investments (Keynes, 1936; Opler et al., 1999; Ozkan & Ozkan, 2004; Lins et al., 2010). Along the same line of thought, Kim et al. (1998) develop a model whereby optimal cash holdings level is represented by a trade-off between the low return on liquid assets and the benefits of minimizing the firm's reliance on costly external financing. Similarly, Almeida et al. (2004) posit that precautionary motive mainly holds for financially constrained firms but not their unconstrained counterparts. In addition, Bates et al., (2009) are of the view that the precautionary motive for cash holdings explains much of the rise in cash holdings observed over the last three decades.

2.2.3 Speculative Motive

The liquidity or speculative motive of holding money designates that firms may keep cash in order not to be deficient in cash when they find alternative investment opportunities. From the extant literature of the speculative motive of holding money, Jones and Ostroy (1984)'s formulation has attracted much attention. They argue that money offers flexibility to its holder, which other assets cannot provide. Under the presence of liquidation (transaction) costs on other assets, money is held to enable the option of waiting for tomorrow to resolve uncertainty rather than investing today under uncertainty. Thus, the firms with higher business opportunities or capital investments hold cash based on the speculation motive as an enabler of options (Ozaki & Nashimura, 2003).

2.2.4 Tax Motive

Daher (2010) argues that cash holdings levels could also be attributed to tax incentives. In the same line thought, Foley et al. (2007) analyzed cash reserves accumulated by large companies, and finds that tax laws encourage multinational firms to hold more cash. Daher further contends that multinational firms worry about repatriation tax as well as double dividend taxation since both corporate earnings and shareholders' dividends are taxable. As such, corporations may opt to stockpile cash instead of distributing it as dividends to shareholders to avoid payment of tax on dividends.

2.2.4 Summary of the Theories of Cash Holding

The review of cash holding theories reveal the relationships between the firm characteristics (determinants) and cash holding to be as shown in table 1.

Table 1: Theoretical Predictions of the Determinants of Cash Holdings

Variable	Trade-off Theory	Pecking Order Theory	Free Cash Flow Theory
Growth opportunities	Positive	Positive	Negative
Leverage	Unknown	Negative	Negative
Liquid asset substitutes	Negative	-	-
Dividend payments	Negative	-	-
Debt maturity	Negative	-	-
Cash Flow Variability	Positive	-	-
Firm Size	Negative	Positive	Positive
Likelihood of Financial Distress	Negative	-	-

Source: Ferreira and Vilela, 2004

2.5 REVIEW OF DETERMINANTS OF CORPORATE CASH HOLDINGS

This section provides an extensive empirical analysis of the determinants of corporate cash holdings at the firm level.

2.5.1 Growth Opportunities

In their study of U.S. industrial firms, Kim et al. (1998) showed that firms with high investment opportunities hold more cash. Very similar results are established by Opler et al. (1999), Ferreira &Vilela (2003), Lee & Song (2007) and Bates et al. (2009). In related work, Bigelli and Vidal (2012) reach the same conclusion for private firms. The authors further argue that the positive relationship between cash holdings and investment opportunities should be stronger for private firms because the latter are exposed to a greater risk of underinvestment due to a low level of internally generate funds (Ang, 1991). According to Pinkowitz and Williamson (2007) the timing of investment decisions may be more uncertain for firms in growth industries which can explain the higher value attached to cash holdings. Ogundipe et al. (2012)empirically show that growth opportunities are insignificant as cash holding determinants in Nigeria. This contradicts the previous findings in other countries such as Kim et al. (1998), Opler et al. (1999), Nguyen (2005), Saddour (2006), and Afza and Adnan (2007) that indicate growth opportunities are significant in determining corporate cash holding.

H_1: *Growth opportunities do not significantly determine corporate cash holdings*

2.5.2 Leverage

According to Ferreira and Vilela (2004) firms with high level of debt are less able to hoard cash due to the higher monitoring role of financial institutions. This is in line with Ozkan and Ozkan (2004) argument that leverage can act as a proxy for the ability of firms to issue debt since debt is a substitute for holding cash. Besides, firms with more liquid assets can covert these assets to cash and in turn hold lower levels of cash, thus a negative association between leverage and cash holdings is expected (Opler et al., 1999; Ozkan & Ozkan, 2004). On the other hand, Baskin (1987) posits that leveraged firms are more likely to stockpile cash due to the higher probability of financial distress. Moreover, high leverage provokes Myers' (1977) underinvestment problem. Thus, holding cash minimizes the potential agency costs of debt (Parrino & Weisbach 1999). Additionally, Guney et al., (2007) indicate that the relationship between leverage and cash holdings can be non-monotonic. Other researchers document a negative relationship between leverage and cash holdings such as; Kim et al. (1998), Bates et al. (2009), Lee and Song (2007) and Bigelli and Sanchez-Vidal (2012) for private firms.

H_2: Leverage does not significantly lead to corporate cash holdings

2.5.3 Firm Size

Nguyen (2006) investigated the hypothesis that cash balances have a precautionary motive. The enquiry found that cash holding decreases with the firm's size. Small firms may hold more cash not only because doing so allows them to avoid the higher issuance costs they incur when raising external funds (Barclay and Smith, 1996), but also because they are more likely to face borrowing constraints (Fazzari& Petersen, 1993). Opler et al. (1999) find that large firms with strong credit ratings hold less cash, while Kim et al. (1998) report an insignificant negative relationship. Also, Ogundipe et al. (2012) study of Nigerian firms established no relationship between size of firm and cash holdings. The negative association between cash holdings and firm size may be due to the economies of scale (Anjum & Malik, 2013). In contrast, Ferreira and Vilela (2004) provide two explanations why large companies might hold excessive cash. The first reason is that larger firms have higher number of shareholders that tend them to managerial discretion. The second reason is that large companies keep large amount of cash in order to prevent a takeover. Bates (2009) confirms

that the analysis of average cash ratio during recent years shows significant increase in cash reserves for smaller and recently listed firms.

H_3: Firm size does not significantly determine corporate cash holdings

2.5.4 Likelihood of Financial Distress

Almeida et al. (2004) present a theory of cash flow sensitivity to underscore the prominence of financial distress in the cash holdings debate. Constrained firms choose optimal cash policy for balancing the profitability of current and future investments by saving a certain amount of cash flows. The results in the study of Almeida et al. (2004) confirm their hypothesis that for constrained firms the probability to save out of cash flow is high. In the results, the tendencies also vary across business cycles since constrained firms retain more cash from their cash flows following negative macroeconomic shocks. Again, the unconstrained firms do not show this tendency. A negative relationship could also be interpreted as support for Jensen's (1986) hypothesis that financial pressure reduces the agency costs of free cash flow. Dittmar and Duchin (2014) avow that CEOs that experienced financial difficulties recalibrate their underestimation of the likelihood and implications of financial difficulties and perceive them to be more important compared to managers that did not experience such difficulties. Thus, CEOs' with such professional experience would hold higher cash levels. Conflicts can arise between stockholders and bondholders when the risk of financial distress is present. It is more likely that the benefit of cash holdings will accrue to bondholders rather than stockholders when the firm is near financial distress (Drobetz & Grüninger 2007).

H_4: Likelihood of financial distress does not significantly determine corporate cash holdings

2.5.5 Cash Flow Variability

The influence cash flow exerts on cash holdings of firms is not clear-cut. It is argued that in the presence of asymmetric information and signaling problems associated with external funding, firms have a preference for internal over external finance (Myers & Majluf, 1984). On the other hand, it is worth noting that cash flow might exert a negative impact on cash holdings. Kim et al. (1998) argue that cash flow provides a ready source of liquidity for investment and maturing liabilities. Furthermore, the risk of having to pass up valuable investment opportunities and facing financial distress is lower for firms with higher cash flows. Accordingly, such firms can afford to have lower cash holdings. However, Kim et al.

(1998) and Saddour (2006) demonstrate that firms with higher cash levels show more volatility in their cash flows and less profitability, that is, negative relation between cash holdings and cash flow. Cash can be considered a buffer to absorb adverse shocks and increase the probability of survivorship during periods of poor business conditions (Bigelli & Sanchez-Vidal, 2012). The precautionary motive for cash holdings is also related to potential concerns about having to cut dividends or suffer potential losses from forced divestitures of assets to obtain cash. It is therefore commonsense to think that higher levels of uncertainty and risk are typically associated with higher levels of cash reserves, especially for financially constrained firms (Han & Qiu, 2007).

H_5: Cash flow variability does not significantly determine corporate cash holdings

3.0 METHODOLOGY

The study adopted a cross-section descriptive survey research design. The study used stratified random sampling technique to select a sample of 156 firms from the study population of 504 private firms registered with the Kenya Association of Manufacturers. The study categorized companies into 12 different sub- sectors which formed groups or basis of stratification. The survey data on self-reported financial measures was collected from the Chief Finance Officers (CFOs) using a questionnaire. The study administered 156 questionnaires to collect self-reported financial measures for private manufacturing firms from the CFOs. However, from the administered questionnaires, 123 were filled in and returned, 6 were not properly completed and were excluded in the data analysis. This represented a response rate of 75%. This response rate was fair and representative and conforms to Bryman and Bell (2011) stipulation that a response rate of 50% is adequate for analysis and reporting, 60% is good and 70% is very good.

3.1 Model Specification

Regression analysis is a constructive statistical technique that can be used to analyze the associations between a set of independent variables and a single dependent variable (Lind et al., 2008). Multivariate analysis incorporated the use of a multiple regression model. This was used to examine how changes in the five independent variables influenced changes in the dependent variable. Specifically, the following linear regression model was applied.

$$CH = \beta_o + \beta_1 GO + \beta_2 LEV + \beta_3 FS + \beta_4 LFD + \beta_5 CFV + \varepsilon$$

Where:

CH	= Cash Holding
GO	= Growth Opportunities
LEV	= Leverage and Debt Structure
FS	= Firm Size
LFD	= Likelihood of Financial Distress
CFV	Cash Flow Variability
ε	= Error term
β_o	= Intercept
β_1- β_5	= Slope coefficients representing the influence of the associated independent variable on the dependent variable

Table 2: Variables Measurement

Variable	Measurement
Corporate Cash Holdings	= Ratio of total cash and equivalent items to total assets
Growth Opportunities	= Yearly sales growth rate
Leverage	= Total liabilities/Total assets
Firm Size	= Natural logarithm of total assets
Likelihood of Financial Distress	= Research and development expenditure standardized by year-end sales
Cash Flow Variability	= Standard deviation of the pretax profit plus depreciation divided by the total assets over a period of 5 years

4.0 RESULTS

4.1 Descriptive Statistics on Determinants of Corporate Cash Holdings

The study findings indicate that the mean growth opportunities rate for the 117 firms was 27.661%. This shows that growth opportunities in private manufacturing firms in Kenya are more than 7.3% that was reported by Bigelli and SánchezVidal (2012) for private Italian firms. The mean leverage ratio was 24.789% and the mean likelihood of financial distress was 6.858% with a standard deviation of 6.141. The mean cash flow variability was 11.923% with a standard error of 1.29538. The statistics also indicate that on average, the private manufacturing firms in Kenya hold 8.190% of their assets as cash. This indicates that Kenyan private manufacturing firms on average hold almost double the amount of cash held by listed firms in Zimbabwe (4.27%) according to findings of a study conducted by Mugumisi and Mawanza (2014). The cash level in Kenyan private manufacturing firms is also higher than the average value of 7.18% reported by Ogundipe et al. (2012) for public firms listed on Nigerian Stock Exchange.

Table 3: Descriptive Statistics on Determinants of Corporate Cash Holdings

Statistic	GO	LEV	FS	LFD	CFV	CH
Mean	27.661	24.789	13.520	6.858	11.923	8.190
Std. Error of Mean	1.398	1.353	.240	.56775	1.295	.457
Std. Deviation	15.119	14.639	2.592	6.141	14.012	4.938
Skewness	.397	1.038	.118	1.225	1.922	.937
Kurtosis	.131	2.415	-.498	.698	3.454	1.316
Range	78.28	85.36	11.61	24.57	68.36	29.75
Minimum	-1.49	.00	7.88	.00	.62	-5.47
Maximum	76.79	85.36	19.49	24.57	68.98	24.28

4.2 Regression Analysis

Prior to running the regression model the study tested for multicollinearity to assess whether any of the regressor variables was a linear function of the other. To test for multicolinearity, variance inflation factor (VIF) was used to assess the component of an explanatory variable's standard error caused by its correlation with other explanatory variables. However, the tolerance measure also can be used which is the reciprocal of VIF. As a rule of thumb, if the VIF of a variable exceeds 10 (VIF > 10) or tolerance is less than 0.10 (1/VIF < 0.10) indicates that variables are multicolinear (Magumisi & Mawanza, 2014). Moreover, values of correlation coefficient greater than 0.8 were used as indicator of multicollinearity problem in this study. The multicollinearity test results revealed that there is no multicollinearity among the regressor variables since none of the variables had a VIF greater than 10 as shown in table 4. Correlation coefficients among the independent variables also showed that none of the relations between any two independent variables was greater than 0.8. This was an indication that multicollinearity was not a problem in this study. The study therefore retained all the explanatory variables.

Table 4: Multicollinearity Statistics

Variable	Tolerance	VIF
Growth Opportunities	.494	2.025
Leverage	.499	2.006
Firm Size	.954	1.048
Likelihood of Financial Distress	.992	1.008
Cash Flow Variability	.963	1.038

The results of the regression analysis as presented in table 5 indicate that the regression model had a coefficient of determination (R^2) of 53% and correlation coefficient (R) of 0.728.

Thus, a combination of growth opportunities, leverage and debt structure, firm size, likelihood of financial distress and cash flow variability explain 53% of the private manufacturing firms' variance in corporate cash holdings.

Table 5: Corporate Cash Holdings Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.728	.530	.509	3.460

Table 6 shows the regression analysis slope coefficients. The t- statistic was used to test the hypothesis on the significance of slope coefficients at 5 per cent level of significance. The results show that the constant was negative and insignificant (β_0 = -3.322, P = 0.074), growth opportunities were negative and insignificant (β_1 = -0.017, P = 0.585), leverage was positive and significant (β_2 = 0.156, P = 0.000), firm size was positive and significant (β_3 = 0.512, P = 0.000), likelihood of financial distress was negative and significant (β_4 = -0.111, P = 0.037), and cash flow variability was positive and significant (β_4 = 0.163, P = 0.000). The Linear regression model of cash holdings become;

CH = *0.156* LEV + *0.512* FS − *0.111* LFD + *0.163* CFV + ε

Table 6: Corporate Cash Holdings Regression Coefficients

Model	Coefficients			
	B	Std. Error	t	Sig.
(Constant)	-3.322	1.839	-1.807	.074
Growth Opportunities	-.017	.030	-.547	.585
Leverage	.156	.031	5.013	.000
Firm Size	.512	.127	4.033	.000
Likelihood of Financial Distress	-.111	.053	-2.110	.037
Cash Flow Variability	.163	.023	6.990	.000

ANOVA (F- Test) was used to test the overall significance of the regression model (the goodness of fit) at 5% level of significance. The findings indicate that the value of computed F statistic was 25.045 with a P value of 0.000 at the *5%* level of significance. The null hypothesis was rejected since the probability value (Pvalue) of computed F is sufficiently low (0.000 < 0.005). Thus, the model fit is acceptable implying that there is a significant linear relationship between the independent and dependent variables.

Table 7: Corporate Cash Holdings ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1499.468	1	299.894	25.045	. 000
Residual	1329.143	115	11.974		
Total	2828.611	116			

4.3 Correlation Analysis

Correlation analysis aids in determining the degree of association between two or more variables (Jahangir & Begum, 2008). Pearson correlation coefficient was used to assess the strength of direction of the association between the variables.

Table 8: Association among Variables

	X_1	X_2	X_3	X4	X_5	Y
Growth Opportunities (X_1)	1					
Sig. (2-tailed)						
Leverage (X_2)	.696**	1				
Sig. (2-tailed)	.000					
Firm Size (X_3)	.119	-.027	1			
Sig. (2-tailed)	.202	.771				
Likelihood of Financial Distress (X_4)	.031	-.005	.080	1		
Sig. (2-tailed)	.737	.954	.394			
Cash Flow Variability (X_5)	.156	.177	-.050	.004	1	
Sig. (2-tailed)	.092	.056	.591	.968		
Corporate Cash Holdings(Y)	**.371****	**.502****	**.216***	**-.119**	**.523****	1
Sig. (2-tailed)	.000	.000	.019	.202	.000	

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

5.0 DISCUSSIONS AND CONCLUSIONS

Based on the findings, the study concludes that there is a negative and insignificant linear relationship between growth opportunities and corporate cash holdings. Thus, growth opportunities have no significant relationship with cash balances of companies hence the rate of growth does not determine cash holdings of private manufacturing firms in Kenya. Despite the insignificant negative relationship, the study provides supportive evidence for the free cash flow theory. According to the proponents of the free cash flow theory, firms with poor growth opportunities accumulate more cash i.e. there is a negative relationship between growth opportunities and the corporate cash holdings.

On the leverage, the study concludes that there is a positive significant determinant of corporate cash holdings among private manufacturing firms in Kenya. The positive relationship between leverage and corporate cash holdings is an indication that as the debt levels increases, the possibility of financial distress increases and consequently firms should stockpile cash. This provides evidence that firms stockpile cash in line with the precautionary motive to reduce net debt and to provide a buffer to meet interest obligations. On the other hand, the positive relationship could also be due to agency theory. The proponents of agency theory contend that because of the existence of agency costs of debt, highly geared firms find it difficult and expensive to raise supplementary funds and sometimes find it difficult to renegotiate present debt covenants to prevent default and bankruptcy. Thus, such firms have high motivations to stockpile cash in accordance with the agency theory.

In regard to firm size, the study concludes that firm size positively and significantly determines corporate cash holding among private manufacturing firms in Kenya. Thus, an increase in size of firms leads to higher cash balances and therefore, the larger firms are expected to accumulate more cash than the smaller firms in Kenya. The significant positive relation between the firm size and corporate cash holdings is supportive of the pecking order theory. According to this theory larger firms are expected to have been more successful in the past and consequently have hoarded moderately more cash than smaller firms. Furthermore, positive relationship could as well be supportive of free cash flow theory since bigger firms hold higher cash levels because they have more flexibility than smaller firms in their financial policies and subsequently experience greater agency problems.

Based on the findings, the study also concludes that there is a negative and significant linear relationship between likelihood of financial distress and cash holdings among private manufacturing firms in Kenya. The empirical results indicate that firms with higher likelihood of financial distress hold less cash whereas firms with low likelihood of financial distress hold more cash in support of trade off theory. Thus, if firms are aware of potential increase in the likelihood of financial distress they will tend to safeguard themselves by holding more cash in line with the precautionary motive as predicted by tradeoff theory.

The study confirms that there is a significant positive relationship between cash flow variability and corporate cash holdings among private manufacturing firms in Kenya. This indicates that private manufacturing firms in Kenya with more cash flow volatility retain more cash. This empirical evidence is mostly in support of the transaction motive for holding cash as predicted by tradeoff theory in order to offer a safe buffer for smooth operations and is also in harmony with pecking order theory. According to pecking order theory, firms prefer to fund themselves with resources generated internally before resorting to the market. However, the findings also support the precautionary motive for cash holdings as predicted by tradeoff theory in order to safeguard the firms against potential concerns of having to suffer potential losses from forced sale of assets to obtain cash.

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