An Assessment of the Relationship between Capital Investments and Financial Performance of Selected SMEs in the Upper East Region of Ghana

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ABSTRACT: The relationship between capital investment and firms' financial performance has for some time been an important concern to many stakeholders in the business environment. This paper aims to study the effect of capital investments on financial performance from small and medium enterprises (SMEs) perspective. The study adopted a panel research design with a balanced data of 36 SMEs from the clientele list of three Accounting Firms in the Upper East region of Ghana. The study covered a period of five (5) years, from 2013-2017. The results were analysed using a fixed effect regression model. Capital investment was measured by the ratio of non-current assets to total assets while the financial performance was measured by the return on assets of the firms. The study revealed that the SMEs annual earnings have showed an upward trend over the study period with an average financial performance of 17.64 per cent. However, the average capital investment ratio was 32.04 per cent over the five-year period with a general downward trend in capital investments in the investment period. The study further established that capital investment as a sole variable has an adverse effect on SMEs financial performance. However, with firm-level variables (such as firm size and liquidity) and macro-economic variables (such as interest rate, exchange rate, and inflation rate) as control variables, the study established a significant and a positive effect of capital investments on financial performance. Based on the findings of the study, recommendations for owners and managers of SMEs have been developed.

KEYWORDS: Capital investments, Financial performance, SMEs, Upper East region, Ghana.

1 INTRODUCTION

The small and medium-scale enterprise (SME) sector is one of the sectors of the economy that play an important role as an engine of growth and development of every country ([1] Gveroski and Jankuloska, 2017). In the SME sector, businesses normally begin with a thought from an individual or more persons (([2] Brew-Sam, 2011), who decides to sacrifice their physical resources or financial resources first into the venture; and in all possibility resort to other persons like family and friends for any help when in need. They further go for financing from financial institutions when they faced expansion challenges.

The SME sector functions as the main vehicle in poverty reduction, job creation, knowledge spill-over, innovation drivers, and general economic advancement (([3] Ibrahim and Ibrahim, 2017; ([4] Mintah, Hayford, Mintah and Anokye, 2014). The SME sector represents the seed for future large firms and multinational companies (([5] Haji, Njuki, Okoth, Musyoka, Mwambota and Rono, 2013). Globally, the success of the SME sector cannot be overlooked. The percentage contribution of SME sector to gross domestic product (GDP) ranges from 60 per cent in China, 57 per cent in Germany, 55.3 per cent in Japan, 50 per cent in Korean and 47.3 per cent in Malaysia (([6] Zotorvie, 2017). In Ghana, the SME sector is recognised as the bulwark of creating jobs and mobilising the informal sector (Ghana Budget Statement, 2014). It has also been further established that the SME sector composed of 92 per cent of the industrial fabric, add 70 per cent to Ghana's GDP and employed more than 80 per cent of the workforce, thus proving that the SME sector in both developed and developing nations are major contributor to economic development (([7] Ackah, Kondegri and Agboy, 2014; ([8] Abor and Quartey, 2010). These significant roles played

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by SMEs in every economy suggest that policymakers must provide the necessary enabling environment to create, develop, and ensure their continuing growth.

The success or failure of SMEs relies on their financial performance (([9] Nketsiah, 2015), and one of the main problems facing such firms is how to undertake prudent decisions concerning investments and financing to remain profitable The decision to invest in a particular capital item can be influenced by either or both firm-level characteristics and macroeconomic variables. Firm-level factors are firm-specific variables, and they exist within an organization and are under the control of firm management (([10] Egbunike and Okerekeoti, 2018). These variables include; firm size, liquidity, assets structure, and capital structure of the firm (([11] Issah and Antwi, 2017; ([12] Kartikasari and Merianti, 2016; ([13] Prempeh, Sekyere and Asare, 2016). Macroeconomic variables happen outside the business and are not in the control of the firm. The key variables include; consumer price index (CPI), GDP, stock market index, the expenditure of government, rate of inflation, interest rate and currency exchange rate (([10] Egbunike and Okerekeoti, 2018; ([11] Issah and Antwi, 2017; World Bank Group, 2015).

The term "financial performance" is the capacity of an organization to deploy its available financial resources to create economic benefits such as profit, business sustainability, market share and growth in the industry that it operates (([14] Obuya, 2017; ([15] Arthur, Abanis, Eliab and Sumil, 2013). The achievement of an entity in relations to its financial issues is normally employed as an overall assessment of a company financial health over time and can be used for inter-company or inter-industry comparison (([16] Levasseur, 2012).

Decisions to invest in a particular asset and firms' financial performances are vital conceptions that need to be considered when assessing the effectiveness of a firm. Prior studies have validated a positive link between prudent decisions on capital investments and firms' financial performance (([17] Kemuma, 2014; ([18] Da Silva, Vieira, Navarro and Parisi, 2010; ([19] Stubelj, 2006). Thus, the more efficient managers of a firm undertake appropriate capital investment decisions the more it can boost the firms' profitability.

Considerably, studies in capital investments are huge and keep growing. Similarly, financial performance measures have received more empirical attention in finance literature. All the same, a study on capital investments and firm performance is a widely research topic (([20] Thakurta and Deb, 2018), though their nexus is on a regular basis considered unequivocally on organizations chronicled on the security exchange and mostly in the jurisdiction of developed countries (([21] Taipi and Ballkoci, 2017; ([18] Da Silva *et al*, 2010; ([22] Heshmati and Lööf, 2008; ([23] Jiang, Chen and Huang, 2006; ([19] Stubelj, 2006). Notwithstanding, it must be noted that various studies on the relationship amid capital investments and financial performance have concentrated on listed firms and in the jurisdiction of developed nations. This research work has moved a step further by delving deeper into examining the effect of capital investments on financial performance from SMEs perspective. Moreover, unlike other studies, this study has also tried in finding out the controlling effect of firm-specific characteristics and macroeconomic variables on the relationship between capital investment and SMEs performance.

The findings of this study can also be useful to practitioners in their assessment of the possible impacts of any proposed capital investment on firm performance. The paper is organized as follows: In the next section, we provide evidences of related work which informs the present research. The data and methods section provides a description of data and variables being used in the research. Section three provides the detailed data analysis steps adopted, whereas Section 4 presents the results of our study. Finally, in conclusion, we summarize the study, outline the contributions, and delineate future research possibilities in Section 5.

2 LITERATURE REVIEW

2.1 THEORETICAL REVIEW

This research is fastened on the neoclassical theory to explain the wealth maximization of investors, the system philosophy to describe the interactions of external environment with the performance of a business organization, and the resource-based view theory to describe in what way firm-level characteristics defines the performance of a company.

2.2 EMPIRICAL LITERATURE

Several empirical studies have been written by scholars to determine the nexus between capital investments and financial performance both in advanced and developing countries without conclusive evidence; some of the studies are of the affirmative while others are not. For instance, ([22] Heshmati and Lööf (2008) examined a two-way fundamental association amid investments and performance indicators at the firm level, and establish a critical positive connection amid firms' investment and performance behaviour by size, however a delicate and measurably irrelevant connection between investment

(in research and development) and firms' profit. Also, a research by ([18] Da Silva *et al* (2010) uncovered mixed findings of investment choices and productivity of non-financial Brazilian organizations. The study used investment ratio as the independent variable while firm size and liquidity were utilized to control the independent variable. The dependent variable was assessed by ROA and Tobin q. The result demonstrated a positive connection concerning contemporary investment and profitability and an adverse relationship amid past investment and profitability. Besides, making use of Tobin's q there was an optimistic association amid past investment and profitability.

In another vein, annual financial reports from the Central Balance Sheet from 2006 to 2011 was utilized to test firms' investment decisions and firms' financial standing concerning the indebtedness levels of Portuguese companies and the decrease in productivity during the ongoing financial and economic crisis (([24] Farinha and Prego, 2013). The study found results in support of the theory that companies' financial performance is without a doubt significant in explaining corporate investment decisions, where firms' profitability had a solid and positive association with firms' investment rate.

([25] Kim (2001) looks at the money-related execution of assembling firms in the USA. In view of a sample of 515 observations for every year over the sample period from 1976-1989, the study reported no direct relationship between capital consumptions and future profit for the general sample (in the wake of controlling for current earnings). Be that as it may, when the sample firms are apportioned into winners and failures, it was established that, the winner firms show an affirmative relationship between capital expenditures and future profits while failure firms display an adverse effect of capital consumptions on future earnings.

([23] Jiang *et al* (2006) tried to build up the connection amid capital consumption and profitability. Their study included manufacturing companies listed on the Taiwan Stock Exchange in the period between 1992 and 2002. They used the first five years as a period of investment and the last six, as the period of profitability. They used capital expenditure ratio as independent variable and corporate earnings as a measure of ROA. The study results uncovered that investments emphatically identifies with the future profitability of companies listed on the Taiwan Stock Exchange.

Again, ([21] Taipi and Ballkoci (2017) investigated the link between capital expenditure and firm performance of 30 Albanian firms in the construction sector for a period between 2008 and 2015. The independent variable of the study was the capital expenditure ratio as measured with the net book value of non-current assets, and the dependent was measured with ROA. It was disclosed that firm performance was described by 63% of the independent variables. More specifically, the regression analysis showed that capital expenditures and leverage ratio were statistically significant and positively correlated with the financial performance of the firm. However, the size of the firm was not a statistically significant variable and it was also negatively correlated with firm performance.

For ([26] Ariemba *et al* (2016), their examination grasped a practical research structure for a time series information over a 10-year time range to decide the influence of investment on the money-related achievement of savings and credit firms in Kitui Central Sub-County. With a census sampling method including every credit cooperative of the 12 firms situated in Kituie Town, reported blended findings like that of ([18] Da Silva *et al* (2010). The study discovered that only research development choices significantly affected performance while extension choices, replacement choice, and renewal decisions had no noteworthy impact.

An analysis by ([27] Njiiri (2015) with a target population of 45 insurance companies in Kenya established a significant effect of investment in (land, certificate of deposit, government securities, corporate securities and stocks) on financial achievement of companies in the insurance industry since over half of the variance in financial performance is described by the investment factors. Additionally, in the Kenyan SMEs segment, ([28] Karanja (2012) utilized both descriptive and inferential estimations to measure the association amid investment choices and financial accomplishment of privately owned businesses in Limuru Town. It was accounted for that investment choices influence money-related performance of SMEs, and along these lines, SME owners should attempt to settle on reasonable investment decisions to guarantee better returns.

([10] Egbunike and Okerekeoti (2018) examine the inter-connection concerning external economic factors, company qualities and money-related performance of listed assembling companies in Nigeria. In particular, the research work makes inquiries to the influence of financing cost, inflation percentage, exchange rate, and the percentage increase in GDP, while company-level factors include firm size, company capital structure and firm liquidity. The dependent variable of money-related performance is estimated as ROA. The research utilized multiple linear regressions as the technique for building up the interrelationship amid the independent variables and the dependent variable. The investigation finds no critical impact for financing cost and exchange rate, but a noteworthy impact for inflation percentage and GDP growth rate on ROA. The examination demonstrated that company size, leverage and liquidity were huge determinants of firms' profit.

([29] Rotich (2016) utilized secondary information on the macroeconomic factors to decide the impact of selected external economic factors on the money-related achievement of listed Kenyan corporations over ten years from 2006 to 2015. Financial performance was estimated by ROA while the independent factors were viewed as inflation, foreign exchange rate, GDP growth rate, financing cost and cash supply. The information was analysed utilizing SPSS programme. The results set up an adverse connection amid the exchange rate and company performance. Be that as it may, there is a solid positive connection between the selected large-scale monetary factors (inflation, GDP growth rate, financing cost and cash supply) and performance of listed organizations.

From SMEs viewpoints, ([3] Ibrahim and Ibrahim (2017) utilized a sample size of five SMEs to break down the influence of SMEs' cost of capital on the monetary performance of SMEs chronicled on the Alternative Securities Market of the Nigerian Stock Exchange Market during a five-year time range from 2008 to 2012. With a linear regression method, the study found that SMEs cost of capital unimportantly influences their financial performance.

Most recently, ([30] Mweresa and Muturi (2018) focussed their study on the effect of investment choices on the money-related achievement of Public Sugar companies in Western Kenya. The study found that investment in production unequivocally influences the financial performance of Public Sugar companies at 4.466 per cent level of significance while investment in distribution chain decisions and investment in financial assets have a moderate and low impact on the money-related achievement of Public Sugar firms respectively.

On the conflictingly to earlier works, ([20] Thakurta and Deb (2018) utilized secondary information to evaluate the influence of information technology (IT) venture attempted by Indian firms over a time period of one and half decades (2000-2004) on their money-related execution. The results show that these ventures impact firm performance which showed up through a decline in both working capital and asset value marketability.

([31] Boadi, Antwi and Lartey (2013) embraced the longitudinal time dimension, explicitly; the panel technique and ordinary least square regression were utilized to discover the determining factors of the Ghanaian insurance firms' profitability. The study gathers secondary data from 16 firms for the period between 2005 and 2010. The study found a positive connection amid liquidity, leverage and profit level of insurance firms. In any case, the investigation establishes an adverse connection between tangibility of assets and profitability.

3 DATA AND METHODS

3.1 RESEARCH DESIGN

The research design considered most suitable was a panel research design. A panel study comprises of time-series and cross-sectional studies (([32] Kumar, 2011). A cross-sectional study involves looking at elements that differ on one key characteristic at a specific point in time (([33] Saunders, Lewis and Thornhill, 2009), while time series looks at events over some time. Panel modelling aids in the identity of a mutual collection of characteristics and at the same time takes into consideration the heterogeneity that exists amid separate entities.

The study considered the period from 2013 to 2017. Though, the period of five years can be inappropriate in comparison with other studies since investments made by entities (especially listed firms) normally takes longer time to generate any form of economic benefits (Jiang *et al*, 2006). However, SME operators do not expect their investments to last far too long before expecting returns. Therefore, the five years' panel data was appropriate for this study.

3.2 POPULATION AND SAMPLE SIZE

The target population was defined and restricted to all SMEs on the client list of three Accounting Firms in Upper East Region as at the end of 2017. To this effect, SMEs that were not clients of these three Accounting Firms were excluded from the study.

Accounting Firm	Population	Sample Size
Say Moha Accounting Firm	8	5
ASJ Consulting Firm	25	13
Abu and Associate	39	18
Total	**72**	**36**

Source: Dataset from 3 Accounting Firms, 10th January 2019
Source of Data

This research adopted secondary data as it focused on a sample of 36 enterprises. These SMEs prepare financial statements which contain the needed information on investments (in non-current assets) and the firm-level variables for this study. Data were obtained from these three Accounting Firms (see Table 1) because they are firms that are registered under Ghana Registrar Department and are recognised by the Institute of Chartered Accountants (Ghana) that offer financial advice and prepare financial reports for these small businesses in the Upper East region. Besides, the macro-economic variables such as interest rate, exchange rate, and inflation rate were secured from Bank of Ghana (bog) and World Bank website. Data was also obtained from these two major institutions because they are institutions that published major credible economic and financial indicators in an economy.

3.3 EMPIRICAL MODEL

Two models were used for the study. That is, model I and model II. The model I leans on the resource-based view (RBV) theory. The basis is that firms are heterogeneous and possess different resources and strategies and thus would have varied level of profitability. The system theory was however incorporated in model II. The RBV theory assumes that the competitiveness of a firm in relations to its growth and expansion of are based on the internal resource capacity of the firm. As such, financial performance which is synonymic to growth can be influenced by the distinctive investment initiatives of the firm in conjunction with its unique size and the level of liquidity risk. Also, the system theory assumes that an entity does not operate in isolation but in an ecosystem where its activities affect its performance. Thus, the full models for the empirical investigation for the study are given as follows:

Model I

$$\text{ROA}_{it} = \gamma + \alpha \text{CInvest}_{it} + \mu_{it} \quad (1)$$

Model II

$$\text{ROA}_{it} = \gamma + \alpha \text{CInvest}_{it} + \beta_1 \text{size}_{it} + \beta_2 \text{liquid}_{it} + \beta_3 \text{IntR}_{it} + \beta_4 \text{InfR}_{it} + \beta_5 \text{ExcR}_{it} + \mu_{it} \quad (2)$$

Where γ is the constant and α is the regression coefficient of interest that measures the effect of capital investments on SMEs financial performance. The ROA is the dependent variable estimated by earnings before interest and tax by total assets of firm i at time t while "cinvest" is the independent variable measured by the total sum incurred to acquire the tangible assets of firm i at time t. The selected frim-level variables (firm size and liquidity ratio) and macro-economic variables (interest rate, exchange rate, and inflation rate) denotes the control variables to capital investments with β_1-β_5 being coefficient of the control variables while μ_{it} Is the error term capturing all other variables omitted in the regression model.

3.4 DEFINITION OF VARIABLES

The definitions of variables and their expected relationship with the dependent variable (ROA) are presented in Table 2 and proceeding sections.

Table 2. List of variables used in the study

Symbol	Variable	Expected sign	Data source
	Dependent variable		
ROA	Return on assets	**N/A**	Annual report
	Independent variable		
Cinvest	Capital Investment ratio	**+**	Annual report
	Control variables		
Size	Firm size	**+**	Annual report
Liquid	Liquidity ratio	**+/-**	Annual report
Intr	Interest rate	**+/-**	Bog website
Excr	Exchange rate	**+/-**	Bog website
Infr	Inflation rate	**+/-**	World Bank website

Source: Authors' construction, 2019

4   EMPIRICAL RESULTS

This section presents the results with respect to the relationship between capital investments and financial performance. It, therefore, presents descriptive statistics of the study, level of correlation among variables in the study, diagnostics tests of the study and regression analysis of the research variables.

4.1   DESCRIPTIVE STATISTICS

The study gave a far-reaching description of capital investments and its effect on firms' money-related performance. The average performance of small firms' financials as assessed by the return on assets for the period of study is 0.1067 and a standard deviation of 0.226. However, the average financial performance could go as low to -1.402 and increase to a maximum of 1.015.

The mean value for investment in SMEs capital assets stood at 0.469 with a standard deviation of 0.332. The study further displays that; the minimum investment could get down as low to 0.003 and increased to a maximum of 1.004. In comparison with prior research works, the average capital investment ratio by SMEs is far below what is reported by ([21] Taipi and Ballkoci (2017) where their study established that capital investments account for 80.40 per cent of the total assets base of Albanian companies in the construction sector. However, in the Ghanaian SME sector the average capital expenditures are more than that of the manufacturing firms in Taiwan where ([23] Jiang et al (2006) reported a capital investment ratio of 6.56 per cent.

Firm size (which is a log of total assets) had a mean score of 0.745, which implies the average total assets of firms in the SME sector is approximately 74.5 in percentage terms. It further shows that firm size has a standard deviation of 0.0410746, indicating a minimal deviation from the expected mean. Also, it had a minimum value of 0.633 and a maximum value of 0.834. In theory, there is no standard value in determining how big or small a firm is, but considering the value of the standard deviation, it can be deduced that there are fewer variations to the average firm size which could have an optimistic influence on firm performance. The result in this study is below what is reported by ([10] Egbunike and Okerekeoti (2018) and ([21] Taipi and Ballkoci (2017), where their studies established an average firm size of 24.189 and 8.615 for manufacturing firms in Nigeria and construction firms in Albanian respectively. This means that Nigerian manufacturing firms and Albanian construction companies are undoubtedly bigger than firms in the Ghanaian SME sector.

The average liquidity ratio of the firms' is 0.426 with a standard deviation of 0.472. The liquidity proportion points out that, SMEs in the study area are highly illiquid, and cannot pay their current liabilities out of their current assets, and its standard deviation was also high. In theory, this is considered not to be an optimum value, although it should take into account the industry because high liquidity levels can mean lower investments or overtrading symptoms. This finding is below the best possible liquidity ratio of 2: 1. Also, ([31] Boadi *et al* (2013) reported a liquidity ratio of 1.572 for insurance firms in Ghana. This suggests that all things being equal, the average liquidity level of firms in the SME sector is worse than firms in the insurance industry in Ghana. Nonetheless, the result of this study established that the liquidity ratio could increase to a maximum of 1.993 and decrease to a minimum of -1.016.

Interest rate, inflation rate and exchange rate had mean values of 0.195, 0.148, and 0.539 respectively. Their respective standard deviations were 0.045, 0.024, and 0.110 respectively. Interest rate had a minimum value of 0.133 and a maximum

value of 0.258. Also, exchange rate recorded a minimum value of 0.341 and a maximum value of 0.645. Inflation rate on the other hand chalked a low value of 0.117 and could go as high as 0.175 over the study period. The outline of descriptive measurements is appeared in Table 3.

Table 3. Summary of descriptive statistics

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
ROA	180	0.107	0.226	-1.402	1.015
Cinvest	180	0.469	0.332	0.003	1.004
Size	180	0.745	0.041	0.633	0.834
Liquid	180	0.426	0.472	-1.016	1.993
Intr	180	0.195	0.045	0.133	0.258
Infr	180	0.148	0.024	0.117	0.175
Excr	180	0.539	0.110	0.341	0.645

Notes: ROA= return on assets; cinvest = capital investment ratio; size = firm size; liquid = liquidity ratio; intr = Interest rate; infr = Inflation rate; excr = Exchange rate

Source: Authors' Computation, 2019

4.2   CORRELATION ANALYSIS

The correlation coefficients which ranges from -1 inclusive to +1 inclusive ($-1 \leq r \leq 1$) establishes the degree of association between any two variables as well as their level of significance. The pairwise correlation amid capital investments and return on assets was -0.146 by way of a probability value 0.0510. The outcomes point out an insignificant and a weak negative link concerning investment (in non-current assets) and SMEs financial performance.

The correlation analysis also revealed a correlation coefficient of 0.075 and a p-value of 0.3186 for firm liquidity. This shows that there is a relationship between firm liquidity and return on assets. However, the extent of relationship even though positive, but is still inconsequential. The study on the other hand established a weak positive association between firm size and return on assets (r = 0.251) and the correlation is statistically significant (p-value = 0.0007).

On the relationship between macroeconomic variables and financial performance of SMEs, the following results were established. The results indicate a very weak positive relationship between interest rate and ROA (r = 0.063). The result further established an insignificant relationship between interest rate and ROA (p-value = 0.3977). There was also an insignificant and a weak positive relationship between inflation rate and ROA (r = 0.104; p-value = 0.1638). The study further established an insignificant and a very weak positive association between exchange rate and ROA (r = 0.030; p-value = 0.6811). The results of VIF suggest that multicollinearity is not an issue since the independent variables vifs were all below 10 and with an average of 1.86. The correlation analysis is indicated in Table 4.

Table 4.   Correlation Analysis

Variable	ROA	Cinvest	Liquid	Size	Intr	Infr	Excr	VIF
ROA	1.0000							
Cinvest	-0.146* (0.0510)	1.0000						1.33
Liquid	0.075 (0.3186)	-0.440*** (0.0000)	1.0000					1.26
Size	0.251*** (0.0007)	-0.269*** (0.0003)	0.112 (0.1340)	1.0000				1.08
Intr	0.063 (0.3977)	0.103 (0.1671)	-0.078 (0.2992)	-0.038 (0.6132)	1.0000			2.28
Infr	0.104 (0.1638)	-0.005 (0.9465)	0.080 (0.2860)	-0.063 (0.3979)	0.405*** (0.0000)	1.0000		2.68
Excr	0.030 (0.6811)	-0.109 (0.1468)	0.151** (0.0426)	-0.024 (0.7492)	-0.343*** (0.0000)	0.499*** (0.0000)	1.0000	2.55

Notes: ROA= return on assets; cinvest = capital investment ratio; size = firm size; liquid = liquidity ratio; intr = Interest rate; infr = Inflation rate; excr = Exchange rate
P-values in parentheses
*** p<0.01, ** p<0.05, * p<1

Source: Authors' Computation, 2019

4.3   PANEL REGRESSION RESULTS

To estimate the panel regression model in equation (1), the Haussmann test was used to decide the preferability between fixed effect model and random effect model. As indicated by the Haussmann test (*chi2 (1)* = 0.776 and p-value = 0.008). This means that the difference in coefficients between fixed effect and the random effect is systematic, providing evidence for a fixed-effect model for the study. Thus, the panel regression model (model I) is stated as:

$$ROA_{it} = 0.133 - 0.056 CInvest_{it}$$

As showed in Table 5, capital investments have a coefficient of -0.056 and a p-value of 0.700. This means that capital investments move in opposite directions with the SMEs financial performances holding all other variables constant. Specifically, a unit upsurge in capital investment will result to some 0.056-unit diminution in the performance of SMEs financials.

In Model II, the study sought to evaluate the influencing effect of both firm-level variables and macroeconomic factors on the relationship between capital investments and financial performance. The simultaneous introduction of firm size, firm liquidity, interest rate, inflation rate, and exchange rate as control variables to the regression equation (model I) was to ascertain whether or not firm financial performance could be influenced by these selected variables. Also, using the Haussmann test results, the study settled on the fixed effect model given that *chi2 (6)* = 36.15 and p-value = 0.0000. Based on the regression results, model II is stated as:

$$ROA_{it} = -6.964 + 0.484\ CInvest_{it} + 8.761\ size_{it} + 0.065\ liquid_{it} + 0.004\ IntR_{it} + 1.686\ InfR_{it} \\ + 0.075\ ExcR_{it}\ (4)$$

As indicated in Table 5, the result demonstrates conclusively that capital investments have a positive effect on financial performance with a coefficient of 0.484 and it is statistically significant with a p-value of 0.003. This means that capital investments go vis-a-vis with financial performances considering other internal and external variables in the study. Specifically, a unit increase in capital investment will lead to some 0.484 unit improvement in the performance of SMEs financials.

The results further indicate that liquidity has no significant effect on firm financial performance. This is because the model produces a p-value of 0.154 and a coefficient of 0.065. However, the effect even though positive, but is still inconsequential. This means a unit increase in a firm liquidity level will have an insignificant rise in financial performance by 0.065 unit change. Thus, if an SME is liquid or illiquid there is the likelihood that its profitability would not be significantly affected by a unit change in its liquidity levels.

Firm size appears to be a noteworthy predictor of performances of companies' financials. Statistically, it reports a significant coefficient and it is positively related to performance. The coefficient of 8.761 and a probability value of 0.000 denote firm performance is likely to increase significantly by 8.761 units as the size of the firm increase by 1 unit. Holding all things constant, it means that the size of a firm offers an important role in determining the kind of relationship a firm enjoys within and outside its operating environment.

It was further revealed that apart from inflation rate, interest rate and exchange rate have insignificant effect on firm financial performance. This is because their probability values are greater than 5% significance level. Specifically, interest rate has a positive coefficient of 0.004 while inflation rate and exchange rate has positive coefficient of 1.686 and 0.075 respectively. This means a unit increase in interest rate and exchange rate will result to an insignificant increase in financial performance by 0.004 and 0.075 respectively. But a percentage increase in inflation rate will leads to a significant increase in financial performance by 1.686. The panel regression results are presented in Table 5.

Table 5. Panel Regression Results for Return on Assets

Variables	Model I	Model II
(Constant)	0.133* (0.069)	-6.964*** (0.961)
Cinvest	-0.056 (0.145)	0.484*** (0.162)
Liquid		0.065 (0.045)
Size		8.761*** (1.199)
Intr		0.004 (0.402)
Infr		1.686** (0.813)
Excr		0.075 (0.177)
Observations	180	180
R-square	0.021	0.297
Prob > F	0.0000	0.0000
Haussmann test	Chi2 (1) = 0.776	Chi2 (6) = 36.15
	P-value = 0.008	P-value = 0.000
	(fixed effect model is preferred in both models)	

Notes: ROA= return on assets; cinvest = capital investment ratio; size = firm size; liquid = liquidity ratio; intr = Interest rate; infr = Inflation rate; excr = Exchange rate
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<1

Source: Authors' Computation, 2019

5   CONCLUSION

The main purpose of capital investments is to generate economic benefits to the firm (([21] Taipi and Ballkoci, 2017). It is therefore relevant to understand the nexus between capital investments and performance of business entities. The link amid capital investments and SMEs financial performance remains uncharted in finance literature. This study ventured into this emerging research area by analysing empirically the association between capital investments and financial performance with particular reference to SMEs in Ghana. The study took into consideration the fact that the decision to invest in non-current assets is not the lone variable that could affect monetary performance and as a result, firm-specific variables and macroeconomic variables were used as control variables to estimate the power of these variables in undertaking investment initiatives among small businesses. In contrast with past writing of ([21] Jiang et al (2006), ([18] Da Silva et al (2010) and ([21]

Taipi and Ballkoci (2017), the study concludes that capital investment as sole variable has adverse and insignificant effect on SMEs financial performances. However, with a consideration of firm-level variables and macroeconomic factors, capital investments have a significant positive effect on SMEs financial performance. Furthermore, the study determined that an increase in firm size supports profitability in the Ghanaian SME sector while liquidity ratio is not a significant indicator of firm performance. However, apart from inflation rate; interest rate and exchange rate do not significantly control the relationship between SMEs capital investments and financial performance over the study period.

The study recommended that owners and managers of SMEs must not interpret capital investment as the only variable in achieving financial performance, but also consider both internal firm characteristics (firm size) and macroeconomic factors (inflation rate) in any proposed capital investments. Also, managers of SMEs ought to consider business development and diversifications. This is because of the significant positive effect of firm size on the performance of a business entity.

The study opens avenues for additional inquiries on the topic. Immediate extension of the work can focus on exploring a comparative study on the effect of capital investments on monetary performance of listed firms and small firms to discover the relationship between capital investments in firms quoted on security exchange market and investments in small businesses.

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