



Impact of Working Capital Management, Ownership Structure and Board Size on the Profitability of Small and Medium-Sized Entities in Nigeria

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ABSTRACT

This paper aims to investigate the impact of working capital management (WCM), family ownership and board size on the profitability of small and medium-sized entities in Nigeria. The panel data regression analysis is employed using financial reports of 47 small and medium enterprises (SMEs) of North-West geopolitical zone in Nigerian for the period 2008-2012. The study found a statistically significant relationship between account receivables period, accounts payable period, cash conversion efficiency and board size with SMEs profitability, proxy by gross operating profits. Further, a positive relationship between inventory holding periods, cash conversion cycle and cash ratio with profitability were established. The result suggest that SMEs owners/managers need to give more emphasis to efficient management of their limited resources by managing their account receivables, accounts payable, inventories and cash effectively for improve profitability. In addition, the study contributes to existing literatures on the importance of WCM and board size to SMEs for sustainability and growth.

Keywords: Working Capital Management, Corporate Governance, Small and Medium Enterprises, Profitability, Nigeria

JEL Classifications: M40

1. INTRODUCTION

Working capital management (WCM) is one of the fundamental components of the overall corporate financial management strategies aims at creating shareholders' value. According to Shin and Soenen (1998); Malik et al., (2010); the success or failure of a business concern is portrayed by the way working capital is being managed due to its impact on the firm's profitability and liquidity. WCM is "the management of firm's short-term resources; current assets and short-term obligations, and the interrelationship among them" (Van Horn, 2004; Filbeck and Kruenger, 2005). Traditionally, most of the firm's financial decisions in the past focussed on capital structure, capital budgeting and dividend policy, until recently when most companies across different industries realises the importance of efficient management of

working capital to firm growth and sustainability (Sen and Oruc, 2009; Tsagem et al., 2014). Garcia-Teruel and Marinez-Solano (2007); Yusoff and Khan (2013) stressed the importance of efficient WCM to corporate profitability especially among small and medium enterprises (SMEs) of 8872 Spanish small and medium-sized entities.

Firm owners/managers evaluate the various WCM policies in order to optimize shareholders value. WCM is particularly important to SMEs due to their inability and constrains to obtain funds from capital market compared to large listed companies (Whited, 1992; Fazzari and Petersen, 1993; Walker, 1989; Petersen and Rajan, 1997; Baños-Caballero et al., 2012, Shezad et al., 2014). WCM is aims to achieve an optimum balance of each of the working capital components; account receivables, inventory, account payables and

cash and marketable securities. Hence, WCM is concerned with strategies for managing these components and the interrelationship among them (Abuzayed, 2012). According to Mathuva (2010), excessive investment in current assets of a firm would reduce profitability, conversely insufficient short term assets result to risk of liquidity. To ensure growth and sustainability, a firm should have sufficient working capital to satisfy its maturing short term obligations and other operational expenses.

In addition to efficient WCM, another important element that a company need to consider is corporate governance. As a result of corporate scandals and financial crisis which engulf many large corporations in USA, South East Asia, Europe and some African countries. The faith of many investors in the capital markets shaken and begins to agitate for improvement in the corporate governance practices. Poor WCM and weak corporate governance are deemed to have a negative impact on firm profitability and value (Gill and Biger, 2013).

In Nigeria, SMEs have been recognized as the most popular form of businesses that contributes largely in the area of income generation, poverty reduction and employment generation (Sunday, 2011). However, the contribution of the sector to economic development in Nigerian is very low as compared to in its contemporaries Asia emerging economies such as China, Indonesia, Malaysia, India, and Singapore despite its resource endowment (SMEDAN/NBS, 2012; Sanusi, 2012). This may be due to insufficient funding, infrastructural facilities, poor financial management related to poor governance and WCM which result to low profitability, growth and failure of many SMEs (Okpara, 2011; Sunday, 2011; SMEDAN/NBS, 2012; Ademola et al., 2013). Thus, this study is set to examine the impact of both WCM and corporate governance mechanisms (focusing on ownership structure and board size) on the profitability of Nigerian SMEs for sustainability and growth.

The rest of the paper is organized as follows: Section 2 reviews the related literatures and development of hypothesis, Section 3 discusses the methodology utilised in this study; Section 4 provides the results and discussions; and finally Section 5 concludes and recommends for the future research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

There are several studies on WCM and corporate governance in relation to firms' profitability. This section reviews some of the efforts made by previous scholars in the field of WCM and corporate governance mechanisms with firms' profitability. For example, Deloof (2003) examines how WCM affects firm profitability for a large sample of Belgian firms during the period 1992-1996. The findings of the study indicates a significant negative association between the inventory days, days of account receivables, and days of accounts payable with gross operating income. Shareholders value could be improved by shortening the number of days' of accounts receivable and inventory days, whereas, the negative relation between the days of accounts

payable and firm profitability is in line with the view that few profitable firms take longer period to pay their debts.

Filbeck and Krueger (2005) analyse the data of 970 firms of 26 industries during the period 1996-1999. The study report that firms are able to reduce their financing cost or increase the funds available for developmental projects by reducing the amount of funds invested in the working capital. Further, Azam and Haider (2011) document a negative relationship between profitability and liquidity of the sampled UK firms and a positive relation between firm's profitability and debts. Lazaridis and Tryfonidis (2006) investigate the WCM and corporate performance of a sample of 131 listed firms in the Athens Stock Exchange during 2001-2004 years. The findings of the study show that cash conversion cycle (CCC) and the firms' leverage are negatively related with firms' profitability. Similarly, fixed financial assets are positively correlated with profitability and account receivables and inventory period exhibit a negative relationship and a positive relationship with profitability respectively (Khan, 2014). The study concludes that firm's profitability can be improved through efficient management of CCC and its components.

Garcia-Teruel and Martinez-Solano (2007) were probably the pioneers' scholars to investigate the WCM of SMEs and their profitability. Their study utilizes 8872 samples of Spanish SMEs for a period of 7 years from 1996 to 2002. The findings shows a highly significant negative association between the SMEs profitability and number of day's account receivables, inventory days and the day's accounts payable. Similarly, the findings exhibit a significant negative association between CCC and the SMEs profitability. Thus, SMEs profitability can be improved by reducing the length of the CCC. In 2008, Garcia-Teruel and Martinez-Solano, further analysed the factors that determine the SMEs cash holdings using a sample of 860 Spanish SMEs for the period 1996-2001. The findings of the study indicate that "SMEs have a target cash level to which they attempt to converge and the target cash level is higher for firms with high growth opportunities."

Amarjit et al. (2010) analysed "the relation between WCM and corporate' profitability of a sample of US manufacturing firms listed on the New York Stock Exchange during the period 2005-2007." The findings of the study report a positive relation between CCC and corporate profitability, a negative relation between receivables collection period and firms' profitability and no significant relation between inventory holding period (IHP) with corporate profitability, similarly no statistical association between accounts payables and firms' profitability. The study concluded that, firms' profitability can be improve by reducing the account receivables period and by managing the CCC in a more efficient way. Similarly, Samson et al., (2012) study revealed a positive association between WCM and net profit margin and a negative relation with gross profit margin.

Baños-Cabellero et al. (2012) examined the "non-linear relation between WCM and the firm profitability." The result of the study shows that "the relation between WCM and firm's profitability is non-linear" (concave) which signify that "SMEs have an optimal

working capital level that maximizes their profitability.” Harsh and Singh (2013) investigates the efficient management of working capital of 200 companies in the Bombay Stock Exchange during the period 2000–2010. The working capital score of each company was calculated using three parameters; normalised value of cash conversion efficiency (CCE), day’s working capital and day’s operating cycle. The result of the study revealed that efficient management of working capital significantly affects profitability.

In the corporate governance one of the major mechanisms that influence firm performance is the ownership structure (Yusoff et al., 2013). According to Jensen and Meckling (1976) ownership structure is defined in terms of capital contributions. James (1999) argued that founding family owned businesses provide a special corporate governance system that curtail agency cost and improve firm performance. Wilson et al. (2013) found that family owned and control firm are significantly less likely to fail. In contrast, Jensen and Meckling (1976); Thomsen and Pedersen (2000); Lausten (2002) argue that in a family owned firm formal monitoring mechanisms are not necessary due to family tie and this can result to the entrepreneur and managers to engage in managerial entrenchment at the expense of the firm which result to low performance.

Studies on the relationship between board size and firm performance produce mixed and inconclusive findings. For example, Jensen (1993) argued that small board is more effective in monitoring management and in decision making. Ujunwa (2012); document a negative relation between board size and firm performance in the Nigerian quoted companies. Similarly, Kumar and Singh (2013) report a negative between board sizes with firm performance of Indian firms. In contrast, Abor and Nicholars (2007) found that large board is better and more effective due to diversity and wide range of expertise among directors. They further add that large board tends to be more powerful for CEO to dominate. Further Mollah et al. (2012) argued that a positive relation exist between board size and firm performance (Qureshi et al., 2014). On the basis of the literature reviewed, the following hypotheses were developed and stated as follows:

H1: There is a significant relationship between efficient WCM and SMEs profitability in Nigeria.

H2: There is a significant relationship between corporate governance and SMEs profitability in Nigeria.

3. MATERIALS AND METHODS

The data for this study is collected from the financial statements of 47 samples of registered SMEs of the North-West geopolitical zone in Nigeria (SMEDAN/NBS, 2012). The documents were obtained from the Corporate Affairs Commission of Nigeria. The period of the study is 5 years from 2008 to 2012 which give a total of 235 firms-year- observations. The main reason for restricting to the 47 sample SMEs is due to availability and accessibility of the data at the time of the study. The sample cut across all industries except the financial firms and services industries due to their nature of activities.

3.1. Measurement of Variables

The dependent variable is the profitability measured by gross operating profit (GOP). Independent variables are the WCM components and two corporate governance mechanisms as utilized by Deloof (2003); Garcia-Teruel and Martinez-Solano, (2007); Amarjit et al. (2010). In addition, several control variables are incorporated into the study, as presented in Table 1.

3.2. Model Specification

Consistent with previous studies Deloof (2003); Mathuva (2010); Baños-Caballero et al. (2012), this study developed eight different models based on the measure of SMEs profitability GOP. The research models are summarised and presented as follows:

$$GOP_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 IHP_{it} + \beta_3 ARP_{it} + \beta_4 APP_{it} + \beta_5 CR_{it} + \beta_6 CCE_{it} + \beta_7 BSIZE_{it} + \beta_8 FMLY_{it} + \beta_{10} FSIZE_{it} + \beta_{11} LEV_{it} + \beta_{12} SGROW_{it} + \beta_{13} AGE_{it} + \beta_{14} GDPGROW_{it} + \epsilon_{it}$$

Where, GOP: Gross operating profit; CCC: Cash conversion cycle; IHP: Inventory holding period; ARP: Account receivable period; APP: Accounts payable period; CR: Corporate cash ratio; CCE: Cash conversion efficiency; BSIZE: Board size; FMLY: Family ownership; FSIZE: Firm size; LEV: Debt to total assets ratio; SGROW: Sales growth; AGE: Age of the firm; GDPGROW: Annual GDP growth; β : Interception of the equations; ϵ : The error term.

All equations were estimated using linear regression analysis as utilized by Deloof (2003); Lazaridis and Tryfonidis (2006); Mathuva (2010).

4. RESULTS AND DISCUSSIONS

The data were analysed using two techniques; descriptive and quantitative. Descriptive analysis is the first step which described the relevant aspects of the data on the variables of the study with the aid of SPSS software consistent study by Raheman and Nasr (2007). The second step is the quantitative analysis section which is also divided into two; correlation and regression analysis using STATA software.

4.1. Sample Characteristics

The major characteristics of the sample SMEs as depicted in Table 2. It includes board size (BSIZE), family ownership (FMLY) and firm age (AGE). For the board size, 20 (8.5%) SMEs have a minimum of 2 directors on board, whereas 10 (4.3%) SMEs have the maximum of 11 members. For family ownership (FMLY), 160 firms are family-owned while 75 firms are non-family owned businesses which represent 68.1% and 31.9% respectively. The numbers of sample SMEs that are within the age of 1-10 years are 45 firms (19.15%), 11-20 years are 75 firms (31.91%) and 21-30 years are 72 (30.64%) at the beginning of the year 2005.

4.2. Descriptive Statistics

Table 3 presents the results of the descriptive statistics for the variables utilised in this study. The GOP has -0.886 and 0.961 as minimum and maximum value with a mean value of -0.146 and standard deviation of 0.325 . This suggested that at least 50%

Table 1: Measurement of variables

Variables	Measurement	Type
Gross operating profit (GOP)	(Total sales - cost of goods sold)/(total assets - financial assets)	Dependent
Cash conversion cycle (CCC)	ARP+IHP-APP	Independent
Account receivable period (ARP)	(Account receivable/net sales)×365 days	
Inventory holding period (IHP)	(Inventories/cost of goods sold)×365 days	
Account payable period (APP)	(Accounts payable/purchases)×365 days	
Corporate cash ratio (CR)	Cash/(total assets-cash)	
Cash conversion efficiency (CCE)	Net cash flow from operating activities/sales	
Board size (BSIZE)	Number of directors on board	
Family ownership (FMLY)	Family ownership	
Firm size (FSIZE)	Natural logarithm of assets	Control variables
Leverage (LEV)	Total debt/total assets	
Sales growth (SGROW)	(Sales ₁ - Sales ₀)/Sales ₀	
Firm age (AGE)	Natural logarithm of firm	
GDP growth (GDPGROW)	Annual GDP growth	

Table 2: Characteristics of the sample

Characteristics	N (%)
Ownership type	
Family	160 (68.1)
Non-family	75 (31.9)
Total	235 (100)
Firm age	
1-10	45 (19.15)
11-20	75 (31.91)
21-30	72 (30.64)
31-40	36 (15.32)
41-50	7 (2.98)
Total	235 (100)
Number of directors	
2	20 (8.5)
3	82 (34.9)
4	77 (32.8)
5	27 (11.5)
6	12 (5.1)
7	7 (3.0)
11	10 (4.3)
Total	235 (100)

Table 3: Descriptive statistics of dependent, independent and control variables (n=235)

Variables	Minimum	Maximum	Mean	Standard deviation
GOP	-0.8861	0.9614	-0.1466	0.3249
CCC	-61	284	15.6900	44.1220
IHP	0	257	14.5100	34.7080
ARP	0	228	15.5100	27.1250
APP	0	113	15.0300	17.9110
CR	0	2.7300	0.2377	0.2437
CCE	-0.0650	0.6000	0.09835	0.1084
BSIZE	2	11	4.0900	1.8350
FSIZE	13.3389	23.2538	16.2767	1.8693
LEV	-0.1000	1.0200	0.1281	0.17186
SGROW	-0.9500	35.0100	1.0644	3.68095
AGE	4	56	21	10.94
GDPGROW	5.6500	7.6900	6.9360	0.8229

GOP: Gross operating profit, CCC: Cash conversion cycle, GDP: Gross domestic product, ARP: Account receivable period, APP: Account payable period, IHP: Inventory holding period, CR: Cash ratio, CCE: Cash conversion efficiency

of the samples SMEs are reporting losses and this may be due to poor management of resources. The CCC has an average of 15.69 days and standard deviation of 44.12 with maximum and minimum period of 284 and -61 days respectively. The account

receivable period (ARP) has a maximum of 228 days and firms take an average of 15.51 days to collect payment from customers with standard deviation of 27.125 days. The mean value of IHP is 14.51 days and standard deviation of 34.706 days, while the maximum IHP stands at 257 days. In average the firms take 15 days to pay their debts and standard deviation is 17.91 days, while the maximum payable period is 113 days per year. The mean value of corporate cash ratio (CR) is 0.24 with standard deviation of 0.244. Likewise the maximum value is 2.73 and minimum value is 0.00. The mean value of CCE is 0.098 and standard deviation of 0.108 while the maximum value is 0.60 and minimum value of -0.065. The descriptive statistics for the control variables reveals a mean value of firm size (FSIZE) of 16.2767 and standard deviation of 1.8693 while the maximum and minimum values are 23.2538 and 13.3369 respectively. The mean value of sales growth (SGROW) rate is 1.064 and standard deviation is 3.681 with maximum value of 35.01 and minimum value of -0.95. For leverage (LEV), the ratio is 0.128 and standard deviation is 0.172 with maximum and minimum of 1.02 and -0.10 respectively. Also the average of sample firms age (AGE) is 21 and standard deviation is 10.94 with maximum firm age of 56 and minimum of 4 years. Finally, the average rate of gross domestic product (GDP) growth (GDPGROW) is 6.94 and standard deviation is 0.82 with maximum and minimum rates of 7.89 and 5.65 respectively.

4.3. Correlation

The result for correlation analysis is presented in Table 4, indicates a significant negative correlation between GOP and ARP, accounts payable period (APP), CCE and FMLY. However, the GOP is positively correlated with CCC, IHP and CR. This association is in line with findings of Abuzayed (2011) which implies that firms with higher profitability are less concern with efficient management of working capital. In the case of Nigerian SMEs this may be due to their limited access to external financing and where access to external financing become limited firms tends to hold liquid reserve in the form of working capital. From the corporate governance mechanisms perspective, the gross operating is positively correlated with board size and negatively correlated with ownership structure.

In addition, the correlations among the independent variables suggest that there is no multicollinearity problem due to low

Table 4: Correlation coefficient matrix

Variables	GOP	CCC	ARP	IHP	APP	CR	CCE	FMLY	BSIZE	FSIZE	SGROW	LEV	AGR	GDPGROW
GOP	1.0000													
CCC	0.1109	1.0000												
ARP	-0.0483	0.2353	1.0000											
IHP	0.0533	0.1154	0.0781	1.0000										
APP	-0.1263	-0.0309	0.0759	0.0885	1.0000									
CR	0.1278	-0.0385	-0.0958	-0.0560	-0.0394	1.0000								
CCE	-0.1839	0.0546	0.1186	-0.0058	0.0730	-0.0465	1.0000							
FMLY	-0.1049	-0.0101	-0.0902	-0.0999	0.0488	0.1703	-0.1621	1.0000						
BSIZE	0.2196	0.1182	-0.0059	0.0323	-0.0398	-0.1814	0.1011	-0.2423	1.0000					
FSIZE	-0.168	0.1005	0.0094	-0.0128	-0.1098	-0.1722	0.4241	-0.1791	0.4822	1.0000				
SGROW	-0.0753	0.0443	-0.0101	-0.0617	0.0046	-0.0542	0.1354	0.0978	-0.0909	0.0828	1.0000			
LEV	0.3588	0.0239	-0.0661	-0.0331	-0.0867	-0.1243	-0.0080	-0.1216	0.3816	0.1244	0.0610	1.000		
AGE	0.0751	-0.0124	-0.0399	-0.0019	-0.0447	0.0170	0.2894	-0.1046	0.3869	0.3094	0.0357	0.2864	1.000	
GDPGROW	-0.0853	0.0337	-0.0316	-0.0340	-0.1782	0.0706	0.0037	-0.0000	0.0080	0.0050	0.0504	-0.0734	0.0476	1.000

CCC: Cash conversion cycle, CCE: Cash conversion efficiency, CR: Cash ratio, IHP: Inventory holding period, APP: Account payable period, ARP: Account receivable period, OLS: Ordinary least squares, GOP: Gross operating profit, GDP: Gross domestic product

coefficient values among all the variables. According to Field (2005) multicollinearity becomes a problem when the correlation coefficient exceeds 0.80 or 0.90. As the result of variance inflation factor test which indicate the mean is 1.25 (below the threshold of 10), it is concluded that multicollinearity does not pose a problem to our regression analysis and this is the advantages of using panel data is to reduce the multicollinearity problem.

4.4. Regression

In this section, the empirical findings of this study on the relationship between WCM, ownership structure and board size with SMEs profitability is presented. The test whether random effect (generalized least squares) model or pooled ordinary least squares (OLS) model is appropriate was conducted. This is to test whether the dataset have specific effect or heterogeneity (λ) using Breusch and Pagan LM test. The result indicates that the probability value is 0.000 which means the $P < 0.05$, rejecting the null hypothesis in favour of the alternative which implies that random effect model is more appropriate.

The next step was the Hausman test between random and fixed effects model and the result indicates a probability value of $<5\%$ ($P < 0.05$). Based on the null hypothesis there is no correlation between λ and x_{it} (RE) and alternative hypothesis there is correlation between the λ and x_{it} (FE). We conclude that the null hypothesis is rejected in favour of the alternative hypothesis that fixed effect model is more appropriate.

Other diagnostic checks include heteroskedasticity test for the residuals of a fixed effect regression model using modified Wald statistic for group wise (Greene, 2000) and test of serial correlation using Wooldridge test for autocorrelation. The result in Table 5 indicates heteroskedasticity and autocorrelation problems in the panel. These problems are rectified using Robust standard error (OLS linear regression) and the results are shown in Appendix VII and summarised in Table 5.

Table 5 present the summary of the panel data regression results of the three models and the robust OLS model. The findings of the study using fixed effect model as the appropriate model for this study shows a significant negative association between

ARP with GOP at 5% significant level supporting the alternative hypothesis. This finding is in line with study by Amarjit et al. (2010); Tauringana and Godfred (2013) indicating increase or decrease in the ARP will significantly affect firm' profitability. The findings also reveal that APP is negatively and significantly related with GOP, rejecting the null hypothesis as reported in Tauringana and Godfred (2013), which suggest the importance of APP to SMEs profitability. Similarly, CCE exhibits a significant negative associated with the dependent variable SMEs profitability measured by GOP supporting the alternative against the null hypothesis. The finding indicates that increase or decrease in CCE will significantly affect firm profitability and is in line with finding by Harsh and Singh (2013). In addition, the result also reveals a negative association between numbers of directors with SMEs profitability at 5% significant level. This finding consistent with the findings of Ujunwa (2012); Kumar and Singh (2013) supporting the alternative hypothesis which shows that small board are more effective in monitoring and decision making than large board. This is consistent with the result in Table 1 that more than 68% of the samples SMEs are family owned businesses which are being managed by the owner and few members of the family.

However, the results shows on the CCC and IHP are positively associated with profitability and insignificant accepting null hypothesis against the alternative hypothesis and therefore not important to the SMEs profitability. This is in line with findings of Mathuva (2009); Amarjit et al. (2010); Tauringana and Godfred (2013). For CR the association is positive and significant with profitability supporting the alternative hypothesis against the null hypothesis and indicating the importance of the ratio to SMEs profitability. The variable family ownership (FMLY) is time-invariant and one of the disadvantage FEM is that it omit all variable that is time-invariant as can be seen in Appendix III. The model also reveals the association between the control variables and the firms' profitability. For example the association between firm sizes, firm age and GDP growth with profitability is negative and significant. However, the relation is found to be positive between sales growth and leverage with the firm profitability indicating that as sales turnover and debt increase SMEs profitability also increases as well.

Table 5: Regression (n=235)

Variables	Pooled OLS	Random effect	Fixed effect	OLS with Hetero and serial correlation
Constant	0.7543 (2.67)***	1.0404 (3.41)***	2.1423 (5.15)***	0.7544 (2.10)**
CCC	0.0017 (1.98)**	0.0007 (1.11)	0.0005 (0.70)	0.0017 (1.96)*
IHP	0.0016 (0.81)	0.0017 (1.08)	0.0018 (1.18)	0.0016 (0.61)
ARP	-0.0006 (-0.55)	-0.0014 (-1.62)	-0.0020 (-2.12)**	-0.0007 (-0.66)
APP	-0.0025 (-2.09)**	-0.0022 (-2.27)**	-0.0016 (-1.75)*	-0.0026 (-1.75)*
CR	0.0038 (2.96)***	0.0019 (1.81)**	0.0021 (1.93)*	0.0038 (2.23)**
CCE	-0.2290 (-1.15)	-0.3525 (-2.00)**	-0.5026 (-2.76)***	-0.2291 (-0.89)
FMLY	-0.0662 (-1.58)	-0.0882 (-1.20)	(Omitted)	-0.0663 (-0.82)
BSIZE	0.0445 (3.36)***	0.0357 (1.85)**	-0.0911 (-2.04)**	0.0445 (2.32)**
FSIZE	-0.0525 (-4.12)***	-0.0560 (-4.06)***	-0.0614 (-3.64)***	-0.0526 (-2.64)**
LEV	0.5484 (4.55)***	0.3118 (3.06)***	0.2460 (2.40)**	0.5484 (2.38)**
SGROW	-0.0011 (-0.22)	0.0008 (-0.22)	0.0026 (0.68)	-0.0011 (-0.19)
FAGE	-0.0014 (-0.04)	-0.0110 (-0.19)	-0.2495 (-1.84)*	-0.0014 (-0.03)
GDPGROW	-0.0399 (-1.75)	-0.0394 (-2.43)**	-0.0288 (-1.80)*	-0.0399 (-2.11)**
Breusch and Pagan LM test	95.47 (0.0000)	-	-	-
Hausman test	-	163.09 (0.0000)	-	-
Multicollinearity (VIF) test	-	-	1.25	-
Heteroskedasticity (χ^2 -statistics)	-	-	4498.79 (0.0000)	-
Serial correlation (F-statistics)	-	-	19.969 (0.0001)	-

Figures in the parentheses are *t*-statistics, except for breusch-pagan LM test, Hausman test, heteroskedasticity and serial correlation tests, which are *P* values. *Significant at 10%, **significant at 5% and ***significant at 1% levels, CCC: Cash conversion cycle. CCE: Cash conversion efficiency, CR: Cash ratio, IHP: Inventory holding period, APP: Account payable period, ARP: Account receivable period, OLS: Ordinary least squares, VIF: Variance inflation factor

Overall our result shows that ARP and APP are negatively associated with the SMEs profitability at 5% and 10% significant level respectively. This result is consistent with previous studies on WCM and firm profitability that include (Deloof, 2003; Garcia-Teruel and Martinez-Solano, 2007; Raheman and Nasr, 2007; Mathuva, 2009; Falope and Ajilore, 2009; Amarjit et al., 2010 and Tauringana and Godfred, 2013). The negative association between ARP and APP with firm profitability is consistent with aggressive WCM strategy and conservative WCM strategy respectively. Furthermore, the negative *t*-values of ARP and APP in the fixed effect model depicted in Table 5 indicate the relative importance of the two variables to SMEs profitability. The *t*-values suggest that SMEs that collect their AR as quickly as possible and pay their payables are more profitable. However, the insignificant and positive association between IHP and CCC with firm profitability is not consistent with findings of most previous studies such as Deloof (2003); Raheman and Nasr (2007); Falope and Ajilore (2009). The conflicting findings may be link to the findings by Ademola et al. (2013) that some of the major problems of the Nigeria SMEs include; poor management practices and lack of qualified and experience personnel.

5. CONCLUSIONS AND RECOMMENDATION

This paper add to the existing literature on WCM, ownership structure and board size with SMEs profitability such as Garcia-Teruel and Martinez-Solano (2007); Mustafa (2011); Baños-Caballero et al. (2010; 2012); Samson et al., (2012); Tauringana and Godfred (2013). Efficient working capital is highly desirable to business survival and growth and this is the most challenging issue to SMEs in developing economies particularly Nigeria. It is worthy to note that the paper explore the relative importance of efficient management of working capital component; account receivables, accounts payable, inventories and cash for SMEs

survival and growth. This is because external financing are not adequately accessible to SMEs in Nigeria. Hence, SMEs owners/managers have to rely on internally generated fund; retained earnings and trade credit to finance their operations. Similarly, government in Nigeria should review policies on SMEs especially on financing for economic growth and development. Future study should investigate generalization of the findings using larger sample. The scope of future studies should include more corporate governance mechanism such as influence of gender in the board of directors and auditors independent.

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