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ABSTRACT: The study assessed the impact of working capital management on corporate financial performance of consumer goods sector in Nigeria. The study specifically determined the impact of average collection period on the return on assets of consumer goods industries in Nigeria; assessed the effect of cash conversion cycle on the return on assets of consumer goods industries in Nigeria and evaluated the effect of average payment period on the return on assets of consumer goods industries in Nigeria. Panel data spanning five years (2013-2017) was gathered for five consumer goods firms in Nigeria. Panel estimation techniques such as descriptive, correlation, fixed effect (cross section and time specific), random effect and other post estimation tests was used in the study. Findings from the study indicated that average collection period exerts negative insignificant impact on the profitability of consumer goods firms with coefficient estimate of -0.0000662 (p=0.848>0.05); cash conversion cycle exerts negative insignificant impact on profitability of consumer goods firms with coefficient estimate of -0.0002468 (p=0.527>0.05) and average payment period exerts negative significant impact on the profitability of consumer goods firms in Nigeria with coefficient estimate of .0016386 (p=0.049<0.05). Premise on these findings, the study suggested that management of manufacturing firms should adopt effective cost reduction strategies, measures to control labour cost vis-à-vis during adequate supervision of workers, monitor firm’s assets and occasion employee training.

KEYWORDS: Working Capital, consumer goods, Average Collection period, average payment period and cash conversion cycle.

I. INTRODUCTION

Over the years, the financial performance of consumer goods sector has drawn a noticeable concern due to its capacity in causing a rapid economic prosperity in Nigeria (Banjoko, Iwuji & Bagshaw, 2012). The level of growth experienced by the consumer goods sector is capable of exerting significant influence on poverty alleviation through the creation of employment and increase in the standard of living of individuals and households alike. Even though the sector possesses this capability, the growth of Nigeria’s consumer goods sector has cascaded over the years. This depressing situation have since the 80s been demonstrated in the performance of Nigerian industries (Manufacturing Association of Nigeria, 2014). Although the economy of Nigeria is characterized by numerous alarming activities including corruption, bad governance, bribery, lack of policy activation, inadequate infrastructural facilities and continuous or unusual competition slows down the pace of converting produced goods into cash and safeguarding the interest of investors in the company (Korode, 2017). The longevity of a firm relies significantly on its ability and efficiency in applying the components of financial management (Karaduman, 2011). Following this, adequate planning and working capital management is urgent in the bid to ascertain impressive results despite the pressure from the increasingly competitive consumer goods industry in Nigeria. All over the world, working capital is an all-important technique required by an organization to ensure adequate management of its resources as this determines the continuous existence of the business (David, 2010; Owolabi & Alu, 2012). Owolabi and Alu (2012) averred that working capital is an extremely important aspect in the structure of an organization; it requires an increased attention, control and proper planning. Considering the scarcity of resources available to organizations, it is expedient for an organization to critically manage its working capital as it plays a vital role in the attainment of attractive financial position and the general performance of the organization (David, 2010).

Working capital describes the fund kept in the form of materials, work in progress, finished goods, cash and receivables. In this way, Khan and Jain (2007) identified that current assets are those assets that can be turned into cash within an accounting period, and the cash received is again invested into these assets; therefore, causing a constant receipt of cash and reinvestment. Hence, working capital forms a part of the significant measures of the financial position of any organization, this which has been referred to as very essential in the existence of any business organization. This occasioned the quest for an optimal working capital management in all business firms.

The consumer goods sector maintains a vital position in the stabilization of economic activities and also represents a key driver in the goal of attaining economic growth and development through employment creation, increase exports, improve economic performance and sources of foreign exchange revenue (Korode, 2017). In the 70s and 80s, the manufacturing sector which the consumer goods sector forms a part in, was ascertained to positively influence the Nigeria’s economic output (GDP) by 11% and 9.9% respectively. Although an evident decline exists during the decade, the continuous fall in the degree of contribution was attributed to the low quality of working capital management, domination of foreign manufacturing firms, importation of products that can be produced locally among other issues (Manufacturers Association of Nigeria, 2012). In 2013, Manufacturers Association of Nigeria maintained that the manufacturing sector impacts the Nation’s GDP by just 6%, this drastic reduction is coupled with the fall in the industrial capacity usage of Nigeria manufacturing sectors which cascaded from 58% to 28%, this justifies the fact that numerous manufactured goods consumed in Nigeria are imported into the economy, this which leads to crowding out effect of the products of local industries and unsatisfactory management of working capital. Salawu and Alao (2014) corroborated in their study that in the first quarter of 2013, the manufacturing sector experienced a noticeable fall in its output, particularly from 7.03% in 2013 to 6.43 in 2014.

In Nigeria, local industries have over the years suffered from the atrocious infrastructural situation including the dilapidated state of infrastructural facilities, limited access to fund, security issues and increased finance costs paid by local manufacturing firms to their creditors, these and several other challenges have impeded the progress of the consumer goods sector (Oni, 2011). Despite having to deal with these depressing situations especially the limited financial access to funds from ordinary and specialized financial institutions, firms have invented an alternative system to reaching funds to improve working capital. Most times, this is done through getting inventory and increasing the productive capacity to satisfy customers’ needs (Korode, 2017). Hence, the need to adequately manage the working capital which involves controlling and financing the current assets of a firm is urgent especially in manufacturing companies. This is so because manufacturing companies undoubtedly owns huge investment in working capital assets and considering this, the effectiveness of these companies depends greatly on absolute financing and working capital management (Kehinde, 2011).

This study recognizes key variables that can possibly exert noticeable impact on the working capital of manufacturing firms. Working capital management will be proxied in the study using average collection period, average payment period and cash conversion cycle while performance will be captured using return on assets. The choice of these variables is influenced by the researcher’s observation concerning the conduct of past researches on working capital management. The average collection period describes the ratio of days to outstanding sales. It refers to the minimum number of days it takes a firm to collect its accounts receivable. Simply put, the average collection period measures the number of days used in converting receivables into cash (Michasiki, 2006). It assesses the minimum number of days customers spend in paying their debts; it demonstrates the effectiveness of the debt collection techniques of business firms. This ratio also indicates if the credit terms are real. It is measured by dividing receivables by total sales and multiplying the result by 365 days (Michasiki, 2006).

The average payment period describes the number of days taken to pay creditors of the firm (Korode, 2017). Deloof (2003) affirmed that delay of payments to suppliers can cause an increase in the firm’s profit, particularly when the funds meant for the creditors are properly reinvested into the current assets of the business. Although the study of Padachi (2006) countered as it discovered that delaying suppliers credit can be very expensive especially when a trade discount is supposed to be merited by the firm for early payment; aside this, defaults in payment can ruin credit reputation of the firm. Also, the cash conversion cycle forms part of the criterion for the assessment of working capital. The cash conversion cycle is a cash flow calculation that examines the period a firm spends in converting its investment in inventory and other resource inputs into cash. It is also referred to as the measure of how long cash is hold down in inventory before the inventory is sold and cash is received from customers (Deloof, 2003).

Generally, working capital management beyond enhancing the financial performance of the unpromising and cash-strapped economy, the day to day operation of the firm needs to be examined. Hence, it is an urgent issue to ascertain and digest the effect of working capital management on the financial performance of consumer goods sector. However, despite the

The significance of the working capital issue and the interest of several researchers over time in Nigeria, an unimpressive attention is given to the impact of working capital management especially on the financial performance of consumer goods sector in Nigeria to the best of the researcher’s familiarity. Based on this premise, this study sets out to assess the impact of working capital management on corporate financial performance of consumer goods sector in Nigeria.

Following the global economic failure, numerous listed firms on the Nigerian Stock Exchange was grossly affected as their profitability position reduced drastically (Korode, 2017), several consumer goods manufacturing firms have since this period been struggling to remain in the market. The unfavorable operating environment characterized by numerous unfriendly infrastructural conditions has posed serious issues hindering the growth of consumer goods industries in Nigeria. Despite these economic issues, the effectiveness of manufacturing firms is extremely influenced by the competence of financial managers particularly in ensuring an effective control of working capital components of the firm (Yahaya, 2016).

Surprisingly, consumer goods manufacturing firms have been faced with numerous liquidity issues triggered by the inability to settle short term commitments in several consumer goods industry (Ogundipe, Abiola & Ogundipe, 2012). This challenge is occasioned by the management’s inability to control its working capital so as to reach the best and also improving the financial performance of the company (Ogboji & Ogunnyomi, 2014). Consequently, several manufacturing firms are faced with problems concerning policies aimed at fast-tracking the collection period; this is accompanied with the unimpressive caution demonstrated by the firm towards the inventory levels (Owolabi & Alu, 2012; Osundina, 2014). These evident defects in the system of numerous manufacturing firms have negatively influenced the profitability of firms and also causing a gross reduction in the worth of companies.

Again, the inability of the manufacturing firms in Nigeria to adequately make plans and draw management techniques to capture the exigencies of working capital of their respective firms according to Korode (2017) called for concerned. The deficient working capital management resulting from the bad management has over the years been the cause of the loss of earnings to over or under-stocking, high bad debts, liquidity challenge, financial losses, low retained earnings, inability to expand, insolvency and defenceless management especially from liquidation (Osho & Nwankwo, 2010).

Furthermore, Ogboji and Ogunnyomi (2014) identified that a significant portion of raw materials inputs employed by Nigerian manufacturing firms are usually imported, the process of import which is undoubtedly affected by the unstable foreign exchange market and monetary policy of the government. The affected inventory of raw materials faced by the weaknesses of foreign exchange in the process of importation, delays in clearing at the Nigerian ports and the bad transportation facilities, these unarguably exerted a negative influence on the production process of manufacturing firms in Nigeria and the delivery of the products to customers (Korode, 2017). The increased finance cost charged by financial institutions in Nigeria have constrained manufacturing firms to short-term finance such as collection on sales, impeding growth in the net working capital. Hence, to further consolidate the performance of the consumer goods sector through an effectual management of working capital, this study aims at assessing the impact of working capital management on corporate financial performance of consumer goods industries in Nigeria.

The broad objective of this study is to assess the impact of working capital management on corporate financial performance of consumer goods sector in Nigeria. The specific objectives of the study are to:

i. determines the impact of average collection period on the return on assets of consumer goods industries in Nigeria.

ii. assess the effect of cash conversion cycle on the return on assets of consumer goods industries in Nigeria.

iii. evaluate the effect of average payment period on the return on assets of consumer goods industries in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Working Capital

Working capital is described as the approach employed by a firm in financing its permanent and temporary current assets (Brigham & Houston, 2001). According to Ashiq (2011), working capital is the relative combination of short and longterm funds by corporate firms in financing working capital. Working capital according to Cyprian and Tobias (2014) is classified into gross and net working capital; gross working capital describes the amount of funds pooled in current assets and mostly used in carrying out the day-to-day operation in the firm while net working capital refers to the deficit between current assets and current liabilities.

2.12 Working Capital Management
The understanding of working capital management can be easily drawn and derived from the understanding of working capital cycle which is the best element to describe working capital management. According to Arnold (2008), working capital cycle contains the major characteristics of business operations. Expectedly, an ineffective management of a particular account in the working cycle can trigger working capital issues for the firm and deteriorate its financial performance. However, Maim and Talat (2009) referred working capital management as the management of the whole areas of both current assets and current liabilities; it is a managerial accounting approach aimed at occasioning efficient administration of areas of working capital including current assets and current liabilities (Robert, Mark & Rabih, 2012). A research was conducted in Vietnam on three economic sectors of agriculture, industry and service by Hoang-Lan, Kieu-Trang, Thi-Bich-Ngoc, Ngoc-Khanh, and Manh, (2018) and they found that the impacts of Working Capital Management on financial performance of three sectors of economic was positive.

2.13 Financial Performance
Financial performance refers to the measure of how well a firm can engage assets in the primary business activities towards generating revenue (Iswatia, 2007). According to Stewart (2009), financial performance is basically used as an approach of estimating the financial health of firms over a certain period of time and can be used to compare firms operating in the same industry or sector. Iswatia (2007) averred that corporate financial performance is key to management as it reflects the result achieved by individuals or group of persons in an organization as well as the quality of management and the level of conformance with stipulated ethics. Managers were equally equipped with opportunity of having a new insight on how to use working capital management to improve the financial performance of the firm as shown in Hoang-Lan, el al (2018).

3.0 RESEARCH METHODS
3.1 Research Design
This study adopts the ex-post facto research design. The population of the study consumer goods firms listed on the Nigeria Stock Exchange. However, this study randomly sampled five consumer goods firms including Dangote Sugar Refineries Plc, Nestle Nigeria Plc, Cadbury Nigeria Plc, Unilever Nigeria Plc and Guinness Nigeria Plc. Secondary panel data spanning five years (2014-2018) was gathered from the audited financial statements of the respective consumer goods firm. Panel estimations including pooled OLS estimation, fixed effect estimation (cross specific and period specific) and random effect estimations, alongside restricted post-estimation tests were conducted in the study.

3.1 Model Specification
This study adapted the model of Hoang-Lan, et al, (2018). in which the Impact of Working Capital Management on Financial Performance of 69 Vietnamese firms listed on Ho Chi Minh Stock Exchange (HOSE) between 2014 and 2016 was analyzed using Cash Conversion Cycle, Cash Flow, Liquidity, Growth, Risk and Leverage as measures of working capital or explanatory variable; however, Return on Assets, Return on Equity and Return on Sales were used as dependent variables. The adapted model is specified below:

\[ \text{ROE} = \beta_0 + \beta_1 \text{CCC} + \beta_2 \text{Growth} + \beta_3 \text{Cash Flow} + \beta_4 \text{Liquidity} + \beta_5 \text{Risk} + \beta_6 \text{Leverage} + \mu \] (1)
\[ \text{ROA} = \beta_0 + \beta_1 \text{CCC} + \beta_2 \text{Growth} + \beta_3 \text{Cash Flow} + \beta_4 \text{Liquidity} + \beta_5 \text{Risk} + \beta_6 \text{Leverage} + \mu \] (2)
\[ \text{ROS} = \beta_0 + \beta_1 \text{CCC} + \beta_2 \text{Growth} + \beta_3 \text{Cash Flow} + \beta_4 \text{Liquidity} + \beta_5 \text{Risk} + \beta_6 \text{Leverage} + \mu \] (3)

This study modified the above model measuring profitability in terms of return on assets, and working capital in terms of Average Collection Period (ACP), Cash Conversion Cycle (CCC) and Average Payment Period (APP). Thus, the model is specified in functional and linear forms below:

\[ \text{ROA} = f (\text{ACP}_t, \text{CCC}_t, \text{APP}_t, U_t) \]

ROA\text{it} = \delta_0 + \delta_1 \text{ACP}\text{it} + \delta_2 \text{CCC}\text{it} + \delta_3 \text{APP}\text{it} + \mu_1

Pooled OLS Model

\[ \text{ROA}_{it} = \alpha_0 + \alpha_1 D(\text{DANGOTE SUGAR}) + \alpha_2 D(\text{NESTLE}) + \alpha_3 D(\text{HONEYYWELL}) + \alpha_4 D(\text{UNILEVER}) \]
\[ + \alpha_5 D(\text{GUIDNESS}) + \beta_1 \text{ACP} + \beta_2 \text{CCC}\text{it} + \beta_3 \text{APP}\text{it} + \mu_2 \]

Least Square Dummy Variable (LSDV) Fixed Effect Model
Random Effect Model

\[ ROA_{it} = \gamma_0 + \gamma_1 ACP_{it} + \gamma_2 CCC_{it} + \gamma_3 APP_{it} + \mu_2 + \epsilon_i \]

Where:
- ROA = Return on Assets
- ACP = Average Collection Period
- CCC = Cash Collection Period
- APP = Average Payment Period

4.0 RESULTS AND DISCUSSION

4.1 Descriptive Analysis of Variables

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>25</td>
<td>.1348</td>
<td>.0821137</td>
<td>.02</td>
<td>.28</td>
</tr>
<tr>
<td>ACP</td>
<td>25</td>
<td>72.646</td>
<td>49.39219</td>
<td>16.27</td>
<td>178.92</td>
</tr>
<tr>
<td>CCC</td>
<td>25</td>
<td>55.6512</td>
<td>97.12423</td>
<td>-94</td>
<td>193.78</td>
</tr>
<tr>
<td>APP</td>
<td>25</td>
<td>90.3404</td>
<td>96.44814</td>
<td>-73.12</td>
<td>267.79</td>
</tr>
</tbody>
</table>

Sources: Author’s Computation, (2020)

Descriptive statistics reported in table 1 revealed that the mean return on assets, average collection period, cash conversion cycle and average payment period for 2014-2018 across the five consumer good companies sampled in the study stood at: .1348 per cent, 72.646 days, 55.6512 days and 90.3404 days respectively. Reported minimum and maximum values stood at: .02 per cent and .28 per cent for return on assets, 16.27 days and 178.92 days for average collection period, -94 days and 193.78 days for cash conversion cycle, -73.12 days and 267.79 for average payment period for respectively.

4.2 Correlation Analysis

Table 2 Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>ACP</th>
<th>CCC</th>
<th>APP</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACP</td>
<td>.2244</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCC</td>
<td>-.1833</td>
<td>.01073</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>APP</td>
<td>.1843</td>
<td>.3260</td>
<td>-.8824</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Sources: Author’s Computation, (2020)

Table 2 reported correlation between variables used in the study. Estimates in table 2 indicate that there is positive correlation between pairs of variables except for cash conversion cycle and return on assets. Result showed correlation between pairs of variables with specific correlation coefficient of 0.2244 for return on assets and average collection period -0.1833 for cash conversion cycle and return on assets, 0.1843 for average payment period respectively. Observably this result demonstrates that the correlations between pairs of variables are relatively strong.

4.3 Pooled OLS Estimation

Table 3: Pooled OLS Parameter Estimates

<table>
<thead>
<tr>
<th>Series: ROA ACP CCC APP</th>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T-Test Values</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>.2480047</td>
<td>.0695565</td>
<td>3.57</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>ACP</td>
<td>.0017722</td>
<td>.0007231</td>
<td>2.45</td>
<td>0.023</td>
</tr>
<tr>
<td></td>
<td>CCC</td>
<td>-.0016876</td>
<td>.000739</td>
<td>-2.28</td>
<td>0.033</td>
</tr>
<tr>
<td></td>
<td>APP</td>
<td>-.0016386</td>
<td>.0007826</td>
<td>-2.09</td>
<td>0.049</td>
</tr>
</tbody>
</table>

Sources: Author’s Computation, (2020)
R-square=0.2503
Adjusted R-square=0.1433

F-statistics=2.34
Prob (F-stat) =0.1028

Pooled OLS panel estimation presented in table 3 reported coefficient estimate of .0017722, -.0016876 and -.0016386 for average collection period, cash conversion cycle and average payment period with the probability values of 0.023, 0.033 and 0.049. The result revealed that average collection period exerts positive significant impact on return on assets of the sampled consumer good firms, cash conversion cycle exerts negative significant impact on return on assets while the impact of average payment period on return on assets is negative and significant. R-square value reported in table 3 revealed that about 25% of the systematic variation in the profitability of the selected consumer goods firms measured in terms of return on assets can be explained by average collection period, cash conversion cycle and average payment period. Reported f-statistics of 2.34 and the probability value of 0.1028 validate the fact that all the included explanatory variables jointly and significantly influence the profitability of consumer good firms sampled in the study.

4.5 Fixed Effect Panel Analysis

Table 4 Fixed Effects Estimates (Cross Sectional and Period Specific)

<table>
<thead>
<tr>
<th>CROSS-SECTIONAL SPECIFIC EFFECT</th>
<th>TIME SPECIFIC EFFECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td>Coefficients</td>
</tr>
<tr>
<td>C</td>
<td>.1932289</td>
</tr>
<tr>
<td>ACP</td>
<td>-.0006548</td>
</tr>
<tr>
<td>CCC</td>
<td>.0002879</td>
</tr>
<tr>
<td>APP</td>
<td>.0004927</td>
</tr>
</tbody>
</table>

R-square=0.8042
Adjusted R-square=0.7236
F-statistics=9.97
Prob(F-stat)= 0.0001

R-square=0.4204
Adjusted R-square=0.1817
F-statistics=1.76
Prob(F-stat)= 0.1610

Sources: Author’s Computation, (2020)

Estimates in table 4 represents results of the fixed effect estimation (cross-sectional and period specific). Notably, results indicated in table 4 showed that when cross sectional effect is integrated into the model the impact of average collection period turned negative and insignificant; impact of cash conversion cycle becomes positive and insignificant. Also, average payment period exerts positive insignificant impact on return on assets. On the other hand, when period specific effect was incorporated into the model, all explanatory variables except average collection period exerts negative and significant impact return on assets of consumer goods companies sampled in the study.

Deviation intercept terms and probability values reported in table 4 stood at .038864 (p=0.050>0.05), -.1621859 (p=0.002<0.05), -.1474463 (p=0.014<0.05) and -.0861857 (p=0.067>0.05) for Nestle, Honeywell, Unilever and Guinness respectively, with the intercept term of the reference firm being Dangote Sugar recorded to be .1932289 (p=0.051=0.05). Deviation intercept terms for period effects stood at: -.0686048 (p=0.178>0.05), -.0942185 (p=0.068>0.05), -.0868048 (p=0.178>0.05) and -.0942185 (p=0.068 >0.05) for 2015, 2016, 2017 and 2018 respectively, with intercept term of reference years being 2014 recorded to be .3289225 p=(0.001<0.05). Reported R-square values stood at 0.8042 for cross section specific estimation and 0.4204 for period specific estimation, reflecting that about 80% of the systematic variation in profitability can be explained by average collection period, cash conversion cycle and average payment period when heterogeneity effect across firms is incorporated into the model, while 42% of the systematic variation can be explained when period heterogeneity effect is integrated into the model.

4.6 Random Effect Analysis

Table 5 Random Effect Estimation
Series: ROA ACP ACC APP

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Z-Test Values</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>.1545176</td>
<td>.0702177</td>
<td>2.20</td>
<td>0.028</td>
</tr>
<tr>
<td>ACP</td>
<td>-.0000662</td>
<td>.0003458</td>
<td>-0.19</td>
<td>0.848</td>
</tr>
<tr>
<td>CCC</td>
<td>-.0002468</td>
<td>.0003907</td>
<td>-0.63</td>
<td>0.527</td>
</tr>
<tr>
<td>APP</td>
<td>-.0016386</td>
<td>.0007826</td>
<td>-2.09</td>
<td>0.049</td>
</tr>
</tbody>
</table>

Sources: Author’s Computation, (2020)
R-square=0.3000
Wald chi2(5)= 1.75
Prob> chi2 = 0.4163

Table 5 presents the random effect estimates. Result showed that the effect of average collection period on return on assets is negative and insignificant when heterogeneity effect is considered in the error term of the model. Meanwhile, cash conversion cycle exerts negative and insignificant impact on return on assets. Also, impact of average payment period on return on assets when heterogeneity is considered in the error term is negative and significant. Specifically, coefficient estimates reported for average collection period, cash conversion cycle and average payment period stood at -0.0000662, -0.0002468 and -0.0016386 with probability values of 0.848, 0.527 and 0.049 respectively. R-square statistics reported in Table 5 stood at about 0.2834 which connote that about 30% of the systematic change in profitability of consumer goods firms sampled in the study can be explained jointly by variation in average collection period, cash conversion cycle and average payment period respectively, incorporating heterogeneity effect across firms over time into the error term.

4.7 Post Estimation Tests

Table 6 Restricted F Test of Heterogeneity (Cross-Sectional and Time Specific)

<table>
<thead>
<tr>
<th>Source: Author’s Computation, (2020)</th>
</tr>
</thead>
</table>

Table 6 reveals result of the heterogeneity test conducted with respects to both cross-sectional and period specific effect. Reported in table 6 are f-statistics values of 12.02 and 1.25 with probability value of 0.0001 and 0.3289 for cross sectional and period specific effect respectively. Hence, from the result it can be concluded that there is only cross sectional heterogeneity/ uniqueness effect among the selected consumer goods companies.

4.8 Hausman Test

Table 7 Hausman Test

| Source: Author’s Computation, (2020) |

Indicated in table 7 is the chi-square value of 1.25 alongside probability value of 0.5366. The result shows that there is enough evidence to reject the null hypothesis that differences in coefficients of fixed effect estimator and random effect estimation is not systematic. Hence, given the p-value (0.5366>0.05), the most consistent and efficient estimation for the investigation conducted in the study is the random effect estimate presented in table 5 above.

4.9 Implication of Findings

The result attained in the study shows average collection period exerts negative insignificant impact on the printability of consumer goods firms with coefficient estimate of -.0000662(p=0.848>0.05) suggesting that decrease in the average collection period will cause an increase in the profitability of consumer goods firms in Nigeria. This is unarguable as the amount of days...

used in reaching debts owed by customers to a significant level controls the amount of revenue possessed by consumer goods firms reduces performing loans and ultimately enhance the profitability position of firms in the consumer goods industry. 

Again, the study established that cash conversion cycle exerts negative insignificant impact on profitability of consumer goods firms with coefficient estimate of -.0002468 (p=0.527>0.05); this implies that a decrease in cash conversion cycle will amount to an increase in the profitability level of consumer goods firms in Nigeria. This is true as the total number of days employed in the processing of goods, sales and collection of funds if reduced significantly will occasion impressive turnover for the firms and consequently increase their profitability position.

Lastly, discoveries from the study indicated average payment period exerts negative significant impact on the profitability of consumer goods firms in Nigeria with coefficient estimate of .0016386 (p=0.049<0.05); the implication of this is that as average payment period reduces, the profitability of consumer goods firms will be on the increase. This finding approves the significance of prompt settlement of debt as well as its positive effect which includes the sustenance of key suppliers, approval of future debt requests among others; these benefits will help consumer good firms attain unbeatable competitive advantage required to sustain their profitability level.

5.0 CONCLUSIONS

The analytical result of estimation carried out in the study discovered that average collection period exerts negative insignificant impact on the printability of consumer goods firms; findings also revealed that cash conversion cycle exerts negative insignificant impact on profitability of consumer goods firms while average payment period exerts negative significant impact on the profitability of consumer goods firms. Premise on these findings, the following suggestions becomes imperative:

Management of consumer goods firms should create effective debt collection technique towards reducing the prolonged collection period and ultimately increase firms’ profitability.

Management of consumer goods firms should adopt marketing and distribution measures aimed at shifting inventory swiftly to end users so as to cause a massive turnover for firms, reduce its cash conversion cycle and consequently improve profitability.

Working capital financing option of consumer goods firms should be modified to encourage a minimized average payment period so as to cause a sustainable credit relationship with suppliers.

REFERENCES
