Account Receivable Management and Corporate Performances: An empirical evidence from quoted manufacturing companies in Nigeria

Dan, Patrick B. S.
Federal University Birnin-Kebbi.
Email danpatrickndhouse@gmail.com

ABSTRACT

This study examines the effect of account receivable period on Corporate Performance of quoted manufacturing firms in Nigeria. The population of this study is made up of listed manufacturing firms in Nigeria for the period of 2010 to 2019. In order to obtain a homogenous sample for the study we further screen the population from possible sample bias. In achieving this we removed seven consumer goods companies that did not provide all related and relevant information necessary for this study. Therefore, the final population of the study becomes nineteen (19) consumer goods companies. The study employed secondary data extracted from published financial reports of the sampled companies and ordinary least square (OLS) regression technique was used as econometric tool employed in testing the hypotheses. Return on Asset is used as the proxy for corporate performance while the explanatory variable is account receivable period. Furthermore, the study is controlled by firm size and leverage. Findings from the study confirms that there is a positive effects between account receivable period and return on asset of listed manufacturing firms in Nigeria. Conclusively, this study accepts the alternate hypothesis which states that Account receivable period significantly affect return on asset of quoted manufacturing firms in Nigeria, and rejects the null hypothesis; Account receivable period does not significantly affect return on asset of quoted manufacturing firms in Nigeria. The study recommends that management should pay attention to the ongoing calibration between liquidity and performance in order to meet the operational and expansion process requirements as well as to achieve the aspirations of the shareholders through enhancing their wealth. We suggest that a comparative study can be carried out to establish whether liquidity affects corporate performance of other sectors or otherwise.

Keywords: Account Receivable Period, Return on Asset, Ordinary Least Square Regression, Manufacturing Firms, Transitionary Theory

INTRODUCTION

Sustainable development relies heavily on its capacity to build financial savings, and its successful use and management [1, 2, 3, 4]. Nigeria’s extreme competition in the manufacturing sector thus demands strategic planning and efficient account receivable control to satisfy the demand. Account receivables are critical problems that a company has to contend with while focused successfully on corporate sustainability [5, 6, 7, 8, 9]. However, the rise in the supply of financial transfers in many organisations has contributed to an improvement in the cost of customer credit, which often directly impacts the business performance of the company [10,11].

With companies offering credit to their clients, receivables are serious challenges and the aim for corporations is to maintain profit margins by reducing write-offs, increasing purchase costs and maximizing the cash received [12,13,14] The handling of receivable accounts should not be confined to clients who are unable to pay; the goal is for firms to use troubled bank account early intervention to allow consumers to adequately support themselves once they are in debt [15].

Management of the receivables accounts is often told by the lending activities and payment process of a corporation. Export receivables are the volume of business fees that the clients are receiving; [16].
Excessive amounts of the profitability accounts receivables could have negative effects. That's if a company with a lot of debtors, it will run out of money and can make short-term financial commitments impossible to meet. Accounts receivables finding a satisfactory balance for all trading receivables characteristics, i.e. currencies, receivables, stocks and accounts payable, are an important component of the corporate value-creating policy and are an important source of competitive advantage for companies [17].

It has also been one of the most significant issues in industries with many financial managers trying to discuss the exact accounts receivable drivers and the adequate amount of accounts receivable to hold down costs, plan for inflation effectively, and increase their business overall operating performance. Management must also decide that when any company sells for cash rather than borrowing as receivable accounts draw interest, the amount of money is locked up in the form of receivables accounts, which is not the case. Accounts receivables are lost money, because they do not generate income when waiting for receipt. Credit facilities are key drivers to economic development [18]. Credit facilities transform countries' economies from trendy myths to competitive, emerging economies.

Companies need to carefully control their receivables so as not to position their liquidity status under extreme pressure and unfair competition [20]. Proper management of the accounts receivable is critical and effective, affecting an organization's economic output, and evaluating a company. A company's ability to synchronize liquidity inflows and asset outflows while formulating a plan for handling cash resources is key to financial performance. The Accounts Receivable Strategy helps maximize money for creditors. Receivables calculated by net present value; [21] represent substantial cuts in business expenses, such as capital budgeting. Receivables increase profitability as it lets consumers determine the quality of the goods before distribution, because debtors, on the other hand, have assets that are cost of opportunity. Receivable accounts depend on their characteristics; the nature, economic importance and essential aspect of existence highlights the reasonableness and the need for diligent control of the receivables [22, 23, 24, 25, 26, 27, 28].

**Statement of the Problem**

Ability to manage commercial receivables is crucial to the firm's profitability. Account Receivable Accounting is a company's life-chain. So, this includes how an entity is handled to decide whether the organization will function or not. If customers easily settle their receivables, they face the good side of the credit balance. Invariable effects of the floating loans on equity and profitability. If repayments are not made consistently due to insufficient debt monitoring, tracking and sorting, otherwise the ability to generate profit is significantly impaired and poor account receivable management is believed to produce inconsistent revenue that impedes the productivity, profitability and liquidity of the company [29,30].

Researchers focus primarily on why and what factors will influence the management of working capital and customer service in Nigeria's manufacturing sector. Past research focused on the assessment of returns on working capital. This study is inspired by insufficient evidence from other studies on account receivables management and factors influencing corporate efficiency in manufacturing sector in Nigeria. Hence, this study is an attempt to address this gap in the management of commercial receivables and corporate efficiency in Nigeria's manufacturing sector [31, 32].
From the foregoing, this study has one objective; to evaluate the significant effect of account receivable period on Return on Asset of listed manufacturing firms in Nigeria.

The study will be of great interest to corporate managers in the manufacturing and non-manufacturing sectors of Nigeria in order to be able to improve the comparative competitive advantage through effective management of receivables policy. It will shed further light on how various receivable management practices can be applied to maximize company efficiency with a view to optimizing shareholder capital. The remainder of this paper is arranged as follows: Section 2 provides conceptual literature as well as theoretical framework, reviews of literature and development of hypothesis. Section 3 presents the methodology, while section 4 presents the results and discussion. Finally, section 5 provides conclusion and recommendation [33, 34, 35].

**Conceptual Literature**

**Corporate Performance**

Generally, performance could be regarded as one of the key factors that has been widely used in measuring success or failure of an organization. Basically, the performance of a firm is categorized into two broad categories namely; financial performance and strategic performance. Particularly, financial performance covers profitability performance, market value performance, and growth performance while the category of strategic performance includes employees’ satisfaction, customers’ satisfaction, environmental performance, environmental audit performance, and social performance. For the purpose of closing on research gaps in the sphere of account receivable management and corporate performance relationship, we adopt Return on Asset as a performance measure previously employed by [36, 37]. It serves as a performance indicator widely employed by financial analysis.

Return on Assets (ROA) is one of the profitability ratios. In the analysis of financial statements, this ratio is most often highlighted, because it can indicate company success to create profits. ROA can measure the company ability to generate profits in the past to then be projected in the future. Assets in question are overall company properties, obtained from the capital itself or from foreign capital that has been converted into company assets used for corporate sustainability. According to Brigham and Houston (2001), return on asset (ROA) is calculated by comparing available net profit for common shareholders to total assets.

Mathematically, the formula is stated below:

$$\text{ROA} = \frac{\text{Net Profit after Tax}}{\text{Total Asset}}$$

Higher ROA value indicates better company performance, because of a higher return on investment rate. "This value reflects the company’s return on all assets (or funding) provided to the company" [38]. Factors affecting on Return on Assets are; Liquidity Ratio which is a ratio to measure a company's ability to meet its short-term liabilities, calculated by comparing its current assets with current liabilities; Asset Management Ratio is "The asset management ratio; measures how effectively the company manages its assets" [39]; Debt Management Ratio is asset management ratio to know the extent of company's ability to meet its long-term obligations (debt) used to finance all company activities.
[40] view accounts receivable (AR) as customers who have not yet made payment for goods or services, which the firm has provided. While [41], defined accounts receivable, which is also called trade debtors, as the amounts owing to a business from customers for invoiced amounts. AR are classed as current assets on the statement of financial position but distinguished from prepayments and other non-trade debtors. The objective of debtors (receivables) management is to minimize the time-lapse between completion of sales and receipt of payments; [20]. Profits may be called real profits after the receivables are turned into cash [33] posited that the management of accounts receivable is largely influence by the credit policy and collection procedure. He maintained that a credit policy specifies requirements to value the worthiness of customers and a collection procedure provides guidelines to collect unpaid invoices that will reduce delays in outstanding receivables. The number of days accounts receivable (DAR) is used as a proxy for the collection policy. DAR is calculated as:

\[
\text{Account Receivable} \times 365 = \frac{\text{Sales}}{\text{DAR}}
\]

The above formula represents the average number of day that the firm takes to collect payments from its customers. The shorter the AR, the better the quality of debtors, since a short AR implies prompt payments by debtors. The DAR should be compared against the firm’s credit terms and policy to ascertain its credit and collection efficiency [25].

**Theoretical Foundations**

**Transactional Cost Theory**

In 1937 Ronald Coase developed the Transactional Cost Theory which makes it one of the first (neo-classical) market-related attempts to scientifically explain the field. Therefore, the principle of transaction costs describes how receivables minimize transaction costs by allowing parties to discriminate between payment and distribution dates when distribution is unknown. When payment can be isolated from distribution the customer can minimize the demand for cash transaction. [22], incorporated the basic theory into a formal two-period model which involves trade-offs under stochastic demand conditions between inventories and receivables. With this model, they make empirically testable conclusions regarding payable and receivable accounts, and their relationship to changes in production prices, competitiveness, risk tolerance, business liquidity status, and bank lending.

Transactions Cost Analysis allows the corporation to continuously evaluate all of the costs associated and then compare them with manufacturing and transaction costs within the industry against outsourcing related production and transaction costs. The estimated delivery times for the element was explained in theory. Nevertheless, this analysis is based on the transactional cost philosophy, as it extends and works according to the account receivables concepts.

**Account Receivable management and Corporate Performance; a Sterilize Effect**

According to [12], poor working capital management policies are caused by decisions regarding credit policy, collection period, inventory planning, purchasing practices of the firm in question, account payable period, growth rate and hedging strategy. When manufacturing firms tighten their credit policy, it reduces the amount of accounts receivable outstanding, and therefore frees up cash. However, there may be an offsetting decline in net sales. Similarly, a more aggressive collection policy should result in more rapid collections, which shrinks the total amount of accounts receivable [20]. Also, firm negotiates with their suppliers for longer payment periods.
This is a source of cash, though suppliers may increase prices in response. If a firm is growing quickly, this calls for large changes in working capital from month to month, as the business must invest in more and more accounts receivable and inventory [23]. This is a major use of cash. The problem can be reduced with a corresponding reduction in the rate of growth.

When a firm actively uses hedging techniques to generate offsetting cash flow, there are less likely to be unexpected changes in working capital, though there will be a transactional cost associated with the hedging transactions themselves; [22] however, authors of similar studies to [22, 24, 26], have identified credit policy as the most prevalent cause of poor working capital management. If these problems are not addressed manufacturing firms can go under and this can have a significant ripple effect on the whole economy [12]. This represents a serious impediment to Nigeria’s effort to achieve economic development and will have a difficult time rising economically to the level of Asian tigers such as Malaysia and Singapore. To better understand these challenges; the author sought to conduct a study on working capital management and its relationship with firm value within quoted manufacturing companies of Nigerian economy.

**EMPIRICAL REVIEW**

[6], studied Working capital management, firm performance and nature of business. The study aims to investigate the impact of the efficiency of working capital management (WCM) on the performance of a sample of Indian companies and explore how the nature of the firm's business influences the significance and direction of this impact. The data for this study were collected for the period of 2012–2018 for 414 non-financial firms listed on the Bombay Stock exchange. Fixed-effect regression models were run by taking Tobin's Q and return on equity (ROE) as dependent variables, and net trade cycle (NTC) and its components as explanatory variables in the presence of liquidity, leverage, size, age and growth as control variables. Sample firms were segregated into manufacturing, trading and service groups, and regression models were used for all the groups to understand the effect of the nature of a firm's business. WCM efficiency has a significant impact on the performance of the sample firms. Non-financial Indian firms deliver better financial performance by maintaining lower NTC. Like NTC, its components also impact firm value and profitability. The results report that the significance of the relationship varies depending upon the nature of the firm's business.

[8], sought to know if Working Capital Management Afect Profitability of Ghanaian Manufacturing Firms. The study analyses the link between working capital management and profitability of firms in the context of developing economies. A balanced panel consisting of eleven (11) manufacturing firms listed on the Ghana Stock Exchange covering the period of 2011-2017 was used. The link between working capital management and profitability was examined using dynamic panel regression (Arellano-Bond Estimation) technique. The study revealed that there is a significant positive linear relationship between working capital management and firms' profitability. The findings also reveal the existence of a concave quadratic relationship between working capital management and firms' profitability. There is an optimal level at which working capital management maximizes firm's profitability, therefore, managers need to ensure that they operate within the limits of the optimal level by implementing an effective and efficient working capital management policy. The study concludes that, the practice of an aggressive working capital management policy maximizes a firm's profitability.

[32], studied the Impact of Working Capital Management on Firm Performance
in different Organizational Life Cycles. The purpose of the study was to examine the impact of working capital management on firm performance in the stages of organizational life cycle. The sample of study includes 45 non-financial firms listed on Pakistan Stock Exchange from the period 2006-2015. Independent variables include working capital management which is measured by cash conversion cycle while the return on assets is used to measure the firm performance. The sample firms are divided into four stages of life cycle; initial stage, rapid growth, maturity and revival stage. Panel data regression models have been utilized to predict the noteworthy relationship. The findings suggest that cash conversion cycle have significant negative association with performance in initial, rapid growth stages and significant positive association in maturity and revival phases of life cycle. So, to increase the performance, firm should not have same policy to manage its working capital throughout the stages of organizational life cycle.

[17], embarked upon to assess how impactful working capital management could be on the profitability of manufacturing firms listed in Nigeria. The accounts payable were found to be positive and significant in influencing profitability of manufacturing firms listed in Nigeria. Also, cash conversion cycle is positive but insignificant at influencing profitability of manufacturing firms listed in Nigeria. The study recommends that granting of credit sales to customers for long or short period of time does not make any significant change on profit so that may not be encouraged by manufacturing firms listed in Nigeria. A fair delay in the payment for raw materials supplied is necessary since such permits the firms to enjoy interest free credits and give room for business expansion.

[18], studied the Determinants of working capital behavior: evidence from Egypt. The purpose of this study is to empirically analyze and identify key factors affecting working capital behavior of companies listed on the Egyptian Stock Exchange. Working capital requirement and cash conversion cycle were used to proxy working capital behavior. The study explored nine main factors widely discussed in previous research to explain working capital behavior: operating cash flow, growth opportunities, performance, firm value, age, size, leverage, economic conditions and industry type. The study employed a panel data analysis for 68 listed Egyptian industrial firms for the period 2000–2010. Different techniques of the generalized method of moments were used to test the validity of the research hypotheses. The results show that working capital behavior is affected by various factors related to firm characteristics, economic conditions and industry type.

[20], in their study of Working Capital Management and Firms' Profitability: Evidence from Quoted Firms on the Nigerian Stock Exchange, undertook a panel data methodology was used with different regression estimators to analyze this relationship based on a balanced panel of 10 listed firms during the period 2008-2017. It was discovered that cash collection period and cash payment
period exerted a negative impact on return on assets, though the impact was only significant for cash payment period on the ground of $-0.064$ ($p = 0.000 < 0.05$), as against the estimate for cash collection period that stood at $-0.032$ ($p = 0.077 > 0.05$). Also discovered was that both the current ratio and inventory period exerted a positive impact on return on assets, though the impact was only significant for current ratio on the ground of $8.172$ ($p = 0.000 < 0.05$), as against the estimate for inventory period that stood at $0.045$ ($p = 0.438 > 0.05$). The study concluded that working capital management affected firms’ profitability in Nigeria. Therefore, it was recommended that while the shorter collection was maintained, payment to creditors should not be elongated so as to enjoy cash discount (if any) and that firms should be proactive in the management of raw materials in order to avoid idle resources that might negatively impact their financial performance.

[21], examined the Impact of Working Capital Management on Profitability of the Selected Listed FMCG Companies in India. The purpose of this study is to examine the relationship and the efficiency of the working capital management strategies of FMCG Company in India. The study used secondary data collected from all the fifteen listed FMCG Company covering the period from 2013-2017. Using panel data analysis, the study finds a significantly positive and negative relationship between profitability and working capital management. Therefore, efficient management of working capital for FMCG Company not only has a positive relationship with profitability but significantly impacts on such firm’s profitability.

[22], examined Profitability and Working Capital Management Nexus: Evidence from Food & Personal Care Products Sector Firms Listed on Pakistan Stock Exchange. The key aim of the study was to find the empirical association amid profitability and working capital management of the Food & Personal Care Product sector Pakistani firms. Eight companies are selected randomly as a sample from the firms listed on Pakistan Stock Exchange. Secondary data for six years, that is, 2010 - 2016 is gathered from the financial reports of these companies and evaluated through Pearson correlation coefficient and regression analysis techniques, using STATA software. The results prove that Return on Assets (ROA) is negatively correlated with Average Collection Period (ACP) and positively correlated with Inventory Turnover in Days (ITID), Average Payment Period (APP), Current Ratio (CR) and Sales Growth (SG). All the relationships are significant except ITID and SG ones.

[24], studied the quadratic relationship between working capital management and firm performance: Evidence from the Nigerian economy. This paper seeks to determine the quadratic relationship between working capital management (WCM) and firm performance. Also, this paper examines the effect of deviation from optimal WCM on firm performance. Therefore, the study uses a sample of 75 non-financial firms listed on the Nigerian Stock Exchange from 2007 to 2015. It adopts the cash conversion cycle component of working capital management to evaluate the quadratic assumption using panel regression. The empirical results from the sample of the study indicate that the relationship between working capital management and firm performance is quadratic. This study also found that an optimal level exits at which investments in working capital will yield the maximum return. This study concludes that deviation from the optimal level of investments in WCM (either above or below) affects the performance of firms. The study, therefore, recommends that firms should promote best practices for maintaining optimal working capital investment level to enhance their performance and sustain growth.

The impact of working capital management on financial performance of quoted consumer goods manufacturing firms in Nigeria was studied by Segun, (2017). This study examined the impact of working capital management on financial
performance of quoted consumer goods manufacturing firms in Nigeria by specifically examined the impact of working capital management on return on assets and gross operating profit. The secondary data used were obtained from annual financial statements over a period of ten (10) years from 2005 to 2014 of purposively sampled fifteen (15) firms. Descriptive statistics were used to measure variations, statistical inferences were drawn using correlation and panel regression analysis was applied on performance and working capital management indicators to test the formulated hypotheses. The findings revealed that efficient working capital management increases financial performance. In conclusion, a negative relationship exists between Cash Conversion Cycle (CCC) and financial performance while there is a positive relationship between Average Collection Period (ACP) and financial performance. The study recommended that firms within the industry may increase their average collection period above the present industry average collection period of 58 days and proper analysis of working capital components should be constantly carried out to ensure that those critical areas for decision making process as it related to each of the performance measurement variables are identified and properly examined.

**METHODOLOGY**

This study adopts ex-post facto research design due to the historical nature of the data set. Annual report of the sampled companies was employed as source of data collection, due to its degree of reliability and widespread acceptability by organizational stakeholders [25 and 26]. The population of this study is made up of listed manufacturing companies for the period between 2010 to 2019. As at 31st December, 2019 the total number of listed manufacturing companies were twenty-six (26) Nigerian Stock Exchange Fact book (2019). In order to obtain a homogenous sample for the study we further screen the population from possible sample bias. In achieving this we removed seven consumer goods companies that did not provide all related and relevant information necessary for this study. Therefore, the final population of the study becomes nineteen (19) consumer goods companies. The study employed secondary data extracted from published financial reports of the sampled companies and ordinary least square (OLS) regression technique was used as econometric tool employed in testing the hypotheses. Furthermore, possible least square regression errors which were tested in this study includes: test for homoscedasticity, test for multicollinearity, test for normality of residual, test for model specification error, test for appropriate functional form and test for influential possible observation. Specifically, our check result reveals that all possible errors are absent but for the test for normality of residua and the presence of heteroscedasticity. Consequently, we rely on the position of Greene (2017), who noted that normality is not required in order to obtain unbiased estimates of the regression coefficients but only required for valid hypothesis testing, that is, the normality assumption assures that the p-values for the t-tests and F-test will be valid.

In this study we adopt and modify similar models of [35, 36, 37, 38, 39] to test the effect of account receivable period on firm performance among consumer goods companies in Nigeria. Furthermore, the study is controlled by firm size and leverage. We specify the econometric as below as;
ROA = $\partial_0 + \partial_1 r_{per} + \partial_2 f_{size} + \partial_3 \text{Lev} + e_t$, ........................................ (1)

Where ROA = Return on Asset  
$r_{per}$ = Receivable Period  
f$_{size}$ = Log of total Asset (Firm Size)  
Lev = Leverage  
$\partial_0$, Slope or Intercept of the Equation  
$\partial_1$ to $\partial_3$, Beta/Coefficients of the variables to be determined  
e$_t$, error or stochastic term

Data Presentation, Analysis and Discussion

This study examines the effect of account receivable period on Corporate Performance of quoted manufacturing firms in Nigeria. Descriptive statistics, data normality test, correlation matrix and Regression analysis were carried out to evaluate the effect of the explanatory variables on selected manufacturing firms in Nigeria. Additionally, heteroscedasticity test was also carried out. To describe the basic features of the analysis done in this study, descriptive statistics is used. The descriptive statistics is shown in the table below:

<table>
<thead>
<tr>
<th>startyear</th>
<th>mean</th>
<th>p50</th>
<th>max</th>
<th>min</th>
<th>sd</th>
<th>sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>roa</td>
<td>7.026572</td>
<td>6.06</td>
<td>227.69</td>
<td>-233.29</td>
<td>32.50536</td>
<td>2213.37</td>
</tr>
<tr>
<td>r_per</td>
<td>2.285778</td>
<td>.76</td>
<td>60.85</td>
<td>-21.25</td>
<td>6.453335</td>
<td>720.02</td>
</tr>
<tr>
<td>fsize</td>
<td>8.463991</td>
<td>1.472</td>
<td>160.516</td>
<td>-60.171</td>
<td>22.65643</td>
<td>266.157</td>
</tr>
<tr>
<td>lev</td>
<td>3.360635</td>
<td>2.22</td>
<td>19.05</td>
<td>0</td>
<td>3.780035</td>
<td>1058.6</td>
</tr>
</tbody>
</table>

Table 1 Descriptive Statistics.  
Source: STATA, 15

In the table above, it is observed that on the average, return on asset (ROA) for the sample firms in 2010 stood at 7.03 with a minimum value of -233.29 and a maximum value of 227.69. Similarly, it is also observed that receivable period is 2.28. This indicate that on the average it took the sample firms 228 days to collect their debt. It is also observed that the maximum number of days it takes for debts to be collected is 60 days. Firm size showed a mean value of 8.46 with a maximum and minimum value of 160 and -60.171. Leverage showed a mean value of 3.36 with a maximum value of 19.05 and a minimum value of 0.

Table 2 Data Normality Test  
Source: STATA, 15

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>W</th>
<th>V</th>
<th>Z</th>
<th>Prob&gt;z</th>
</tr>
</thead>
<tbody>
<tr>
<td>roa</td>
<td>315</td>
<td>0.60218</td>
<td>88.505</td>
<td>10.548</td>
<td>0.00000</td>
</tr>
<tr>
<td>r_per</td>
<td>315</td>
<td>0.40752</td>
<td>131.810</td>
<td>11.485</td>
<td>0.00000</td>
</tr>
<tr>
<td>fsize</td>
<td>315</td>
<td>0.53041</td>
<td>104.472</td>
<td>10.938</td>
<td>0.00000</td>
</tr>
<tr>
<td>lev</td>
<td>315</td>
<td>0.93442</td>
<td>14.589</td>
<td>6.306</td>
<td>0.00000</td>
</tr>
</tbody>
</table>

From the table above, the values of 0.60, 0.40, 0.53, 0.93, for ROA, account receivable period, firm size, and leverage respectively exceeds the Shapiro Wilk criteria for data normality of 0.05. This indicate that the data set is well modeled and so suitable for used in this study. In statistics, normality tests are used to determine if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed.
Table 3 Correlational Matrix

<table>
<thead>
<tr>
<th></th>
<th>r_per</th>
<th>fsize</th>
<th>lev</th>
<th>roa</th>
</tr>
</thead>
<tbody>
<tr>
<td>r_per</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fsize</td>
<td>0.1945</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lev</td>
<td>0.0876</td>
<td>0.0361</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>roa</td>
<td>0.3464</td>
<td>0.0827</td>
<td>0.0141</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Source: STATA, 15

Table 3 shows the relationships between the dependent and independent variable of this study. As observed, there is a positive relationship between the explanatory variable of account receivable period (0.35) and return on asset. For the control variables, firm size and leverage are observed to be positively correlated to return on asset (0.19) and (0.09) respectively. However, closer look at the strength of the relationship reveals a weak relationship as the values are less than 0.5 (50%).

Table 4 Regression Analysis

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 315</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>42658.3185</td>
<td>4</td>
<td>10664.5796</td>
<td>F(4, 310) = 11.44</td>
</tr>
<tr>
<td>Residual</td>
<td>289113.674</td>
<td>310</td>
<td>932.624755</td>
<td>Prob &gt; F = 0.0000</td>
</tr>
<tr>
<td>Total</td>
<td>331771.993</td>
<td>314</td>
<td>1056.5987</td>
<td>R-squared = 0.1286</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Adj R-squared = 0.1173</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Root MSE = 30.539</td>
</tr>
</tbody>
</table>

| roa | Coef. | Std. Err. | t     | P>|t| | [95% Conf.Interv] |
|-----|-------|-----------|-------|------|-----------------|
| r_per | .4633147 | .2733454 | 1.69  | 0.091 | -0.745322 | 1.001162 |
| fsize | .4976775 | .0778336 | 6.39  | 0.000 | .3445286 | .6508263 |
| lev | -.0254517 | .4749803 | -0.05 | 0.957 | -.9600449 | .9091414 |
| _cons | 2.248757 | 3.045777 | 0.74  | 0.461 | -3.744253 | 8.241767 |

Source: STATA, 15

In the table above, the value of R squared is 0.13. Suggesting that about 13% percent change in corporate performance proxied by return on asset in this study is explained by the independent variable. Furthermore, it explains that 87% of the changes in the sample firm performance cannot be traced to the independent variable. However, with 0.00 as the probability of the f-statistics, it means the data is suitable for interpretation as the acceptability of the model fit is reaffirmed. The value of F-statistics is the probability that the null hypothesis for the full model is true (i.e., all of the regression coefficients are zero). Additionally, to explain the changes that occurred in performance of the firms in the years under review, it shows that the data can be relied upon for policy recommendation.

From the regression results above, it can be seen that there is a positive relationship between account receivable period and corporate performance as the coefficient value is 0.463, t value is 1.69 and the probability value is 0.09. Meaning that account receivable period significantly affects performance of manufacturing firms in Nigeria. Conclusively, this study accepts the alternate hypothesis which states that Account receivable period significantly affect return on asset of quoted manufacturing firms in Nigeria, and rejects the null hypothesis; Account receivable period does not significantly affect return on asset of quoted manufacturing firms in Nigeria.

The findings are in agreement with previous study of [5], who carried out a study on working capital management and financial performance of
manufacturing sectors in Sri Lanka. Niresh (2012), employed correlation and regression analysis models for analysis and the result of the analysis revealed that there is significant relationship between current ratio and performance measures and hence the study concludes that, manufacturing firms in Sri Lanka follow conservative working capital management policy.

This conclusion is in line with prior studies of [6], who found a relationship between the account receivable period and return on assets. While [7] conclude that there is no significant relationship between receivable period and return on assets. [5], found that the current ratio and cash ratio are significantly associated with return on assets. [12, 15], confirmed the liquidity ratios have positive significant effect on return on assets. [33] indicated a relationship between liquidity ratios.

CONCLUSION AND RECOMMENDATION

Liquidity management is an important tool for the management of organizations; it reflects the organization’s ability to repay short-term liabilities, which include operating expenses and financial expenses resulting within the organization in the short term. As well as part of long-term debt during the financial year or the operating cycle, whichever is longer. There are many liquidity ratios used by organizations to manage their liquidity such as (current ratio, quick ratio, cash ratio, defensive interval ratio) which can greatly affect the financial performance of companies; [21]. Current assets include the receivable accounts, inventory, investments for trading and cash and other. While current liabilities include the short-term current liabilities such as accounts of creditors that part of long-term debt during the financial year or operating cycle [22].

Liquidity ratios show the entity’s ability to meet its short-term liabilities, as the weakness of the value of these ratios indicates that the organization may face difficulties in meeting short-term financial liabilities [22]. This in turn would negatively affect the volume of company’s activity, thus on its financial performance. On the other hand, the improvement in the values of these ratios can be pointing to recovery in liquidity of companies, which may reflect positively on the volume of activity, and therefore on its financial performance [8]. In line with empirical results, this study concludes that there is a positive effect between account receivable period and return on asset of listed manufacturing firms in Nigeria.

The study recommends that management should pay attention to the ongoing calibration between liquidity and performance in order to meet the operational and expansion process requirements as well as to achieve the aspirations of the shareholders through enhancing their wealth. We suggest that a comparative study can be carried out to establish whether liquidity affects corporate performance of other sectors or otherwise. The results of such studies are essential for comparison purposes as they can provide experience from elsewhere and provide concrete facts upon which reliable conclusions can be made in relation to the study variables.

REFERENCES


and privatised manufacturing firms in Eritrea (Doctoral dissertation, University of Groningen).


