HUMAN ASSET EXPENDITURE AND RETURN ON ASSET OF OIL AND GAS COMPANIES IN PORT HARCOURT, RIVERS STATE

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ABSTRACT
The study investigates the impact of human asset expenditure on return on asset. Two research questions and two hypotheses were drawn for the study. 400 questionnaire were distributed to the selected oil and gas companies in Port Harcourt. A statistical tools called SPSS ver. 21 was used for the statistical analysis (descriptive and linear regression). The findings showed that human capital expenditure be capitalized in the statement of financial position. Again, that human revenue expenditure be charged to profit or loss as management expenses. Therefore, there is statistical significant relationship between human asset expenditure and return on asset of oil and gas companies in Port Harcourt, Rivers State. In conclusion, a reasonable and additional profit is accrued when human asset is deployed in an organization, hence such profit should be treated as intangible asset. It is recommended, that oil and gas companies should minimize their cost of human capital development as to optimize return on asset for stakeholders; that International Financial Report Standard (IFRS) and other accounting bodies should regulate the treatment of human capital as intangible asset in the statement of financial positions; that wages and sales/other benefits should be disclosed as management expenses in the profit or loss account.

Keywords: Human asset expenditure, human capital expenditure, revenue expenditure, returns on asset, statement of financial position, profit or loss account.

INTRODUCTION
The crux of every investment is to appropriate profit from the capital employed in the business otherwise known as return on investment, asset and equity. The business of oil and gas companies cannot be exonerated in this juncture. The economic growth, competitiveness and sustainability of oil and gas companies lies on incessant manpower development (human asset expenditure). Therefore, the place of human resources accounting cannot be jeopardized. Human asset is one of the greatest asset to oil and gas companies all over the world.
The classical economist approach uses “4-Ms” in production – money, machine, material and men (Meng-ya, 2005). It is important to identify that human asset (men) is one of them. The most interesting thing is that employee (men or labour) is the major part of production which is usually ignored in the accounting treatment. However, the first three are recognized in the statement of financial position of an organization while the fourth ‘M’ (Men) is absent or omitted in the statement of financial position. The assets of an organization is classified into tangible and intangible assets (Brummet, 1970).

In the same vein, human asset is treated under human resource accounting, therefore, American Accounting Association (1973) defined Human Resource Accounting (HRA) as ‘the process of identifying and measuring data about human resources and communicating this information to the interested parties’.

However, the classification of human capital expenditure is segmented into two parts: capital and revenue expenditures. Capital expenditure involves the cost of hiring, employment, education employee. Some organizations capitalize the essential part of expenditure like education costs because it will be an advantage for training for some years.

Human capital development cost treatment involves the treatment of cost incurred by the organization for all the personnel function. Hence the challenge is how to measure the economic value of the employee individually in production process. The two main components of human capital development cost treatment were investment related to employees and the value generated by them. Investment in human capital included all costs incurred in increasing and upgrading the employees’ skill sets and knowledge. Again, the main setback for reporting human asset expenditure externally is that the information reported could be sensitive to the reporting companies and regarded as something that should not be shared externally because of the information may give important insight to competitors or could lead to a negative interpretation on the part of the stakeholders.

The accounting treatment of human asset is not captured (Chang &Hseih, 2011). Human asset is an integral part of non-current and currents assets that yield profitability. The success or failure of an organization depends on how best the scarce physical resources are utilized by the human asset. The shareholders’ equity employee on human and physical assets are expected to generate revenue.

In the statement of financial position, physical assets are treated as non-current and current assets while the consideration of human asset is eliminated. Employee facilitate the coordination, operation, and manning the other 3Ms (money, machine and material) in production which is an oversight in the accounting treatment. The tangible asset is physical assets while the intangible includes goodwill, patents, copyrights, etc. But human asset is not considered at all. Here physical assets include building, furniture and fitting, motor vehicles, generators and others like cash, inventories, bank balance, etc (Anuonye, 2015).

According to Brummet (1970), there should be capitalization of the firm’s training and development of employee and they should be treated as assets for the purpose of human resource accounting. Brummet further posited that the amount so capitalized are to be shown on the statement of financial position under the heading human asset as distinguished from physical assets and that the human asset should be amortised and written off according to the conventional accounting method.

Companies do not attach first priority to the measurement of human assets; rather they face more urgent issues like human resource requirement and allocation. Another challenge of human capital development cost treatment is that the acceptance of human resource accounting lack of universal approach to its reporting thereby defining the
standards that would allow for valuable and meaningful comparisons. Because there is a current absence of universal definition, the companies that are proactive enough to measure, do it ‘their way’.

The following objectives would be used for this study. They are:
1. To determine the relationship between human capital expenditure and return on asset.
2. To determine the relationship between human revenue expenditure and return on asset.

Research Questions:
1. What is the relationship between human capital expenditure and return on asset?
2. What is the relationship between human revenue expenditure and return on asset?

Hypotheses
1. There is no significant relationship between human capital expenditure and return on asset.
2. There is no significant relationship between human revenue expenditure and return on asset.

Figure 1: Researcher’s conceptualization of Human Asset Expenditure and Return on Asset. Adopted and modified from Brummet (1970) & Ifurueze (2013).

LITERATURE PERSPECTIVE
Theoretical perspective
Human Capital Theory

Human capital refers to the productive abilities of employee of Becker in 1964. The theory surfaced from a branch of economics (labour economics) that draw attention on general workforce in quantitative condition. The theory infers that education or training increases productivity through productive application of knowledge and skills thus future revenue increases overtime.

The exhibition of skills through experiences and knowledge tends to have economic advantage to organization; thus, this makes up the organization’s human capital. Like other assets, human capital has value in the market place, but unlike other assets, the potential worth of human capital can be fully identified only with the integration of the employee. Therefore, all costs associated with eliciting productive characters from employees including
those in line with motivating, monitoring, and retaining them – constitute human capital investments made in anticipation of future returns (Flamholtz & Lacey, 1981). Organizations can use human resource management in a variety of ways to boost their human capital (Cascio, 1991; Flamholtz & Lacey, 1981). For example, they can “buy” human capital in the market, e.g. by offering widespread training and development opportunities. Investments of either type have related costs, which are quantifiable only to the extent the organization is able to productively use the accumulated capital (Tsang et al., 1991).

In human capital theory, contextual factors such as market conditions, unions, business strategies, and technology are important because they can influence the worth of the organization’s human capital and the worth of the anticipated returns, such as productivity gains (Boudreau & Berger, 1985; Russell et al., 1993).

**Human Capital Expenditure**

Classifying human asset expenditure in companies seems to have significant effect on its profitability. These can be analysed from the short run effect and the long run effect. Onafaluyo, Eke and Akinlabi (2011) cited in Anuonye (2015) restate the short run and long run effect of classifying human capital expenditure. Looking at the short run effect, if an organization is starting operation newly, the cost incurred to procure staff, train them and pay their salaries may not initially brings profit. In fact, it may end up with the organization incurring losses because there is tendency of expending up more cash in anticipation for profit. But the long run effect on the other hand, showsthat organization is growing with competitive edge over its competitor.

Human capital expenditure entails the hiring cost, selection cost, placement cost, formal training cost, on the job training cost, special training cost and development programmes cost.

- **Recruitment Cost**

  This is cost associated with the identification of appropriate, qualify individual (labour) from within and outside the company. For instance, the cost of examining materials, administrative expenses, advertising expenses, consultancy fees and others miscellaneous expenses.

- **Placement Cost**

  The successful employee are recruited and deployed, placed and posted a particular department or location outside the state of employment processes. The placement cost involves the traveling cost, communication cost (recharge card and data bundle) are necessary.

- **Formal Training Cost**

  This refers to the cost associated with the conventional training orientation given to the employee from the superior overtime. The allowances and advances to the training staff and the fixed cost of training schools are particularly the work of human resource department.

- **On the job training Cost:**

  Recruited employee must be trained to do the job expected while is on the job. In this process the cost mishandling and spoiling the job cost the company more than what he actually contributes.

- **Special training Cost**
In achieving the best from the employee, sometimes special training arrangement programmes are made. Such training have a distinctive consultant who trains employee according to the organization operations and activities. A training fee is paid to the consultant at the end of the training exercise.

- Development Programmes Cost:
  The need to time to time advance the knowledge of employee becomes the key-point to organizational growth and sustainability. An employee may be allowed to attend lectures at local and international conferences and seminars. Such associated cost such as delegates fees, travel and tours cost, loss of output during the development programmes.

**Revenue Expenditure**
Revenue expenditure are those cost that are incurred in day-to-day business affairs which will be utilized within the current accounting year in which they occurred. These costs are recurrent in nature and do not form part of the non-current asset cost. Revenue expenditure is a cost that are usually expense in the accounting period when the expenditure are in place which are usually deliberated in the context of fixed assets. The revenue expenditure takes place after a fixed asset had been put to use. The examples of revenue expenditure are maintenance of assets, wages and salaries, utility expenses, selling expenses, rent expenses. For the purpose of human asset accounting wages and salaries are associated in the production cost.

Revenue expenditure is usually charged to statement of profit or loss as management expenses. Mirvis and Macy (1976) quoted in Ifurueze (2013) analyzed the brain behind the treatment of development costs; which indicates that it offers benefits beyond the most recent accounting period. Odesa (2014) also acknowledged the consequence of classifying the cost of human assets in the books of account that require information about HC assets in the organization, such as investors and managers. Investors are the existing and potential shareholders of an organization that needs information about the value of human resources to help the organization make decisions. While managers are those who ensure the effective use of human capital to improve the future profits of the organization. Therefore, the charging of this investment cost in the statement of comprehensive income will cost as a cost to produce the relatively low net profit at the end of the accounting period.

**Return on Asset**
Return on assets (ROA) is a financial ratio that earns the percentage of the company's earnings in relation to total assets. It is generally defined as net income divided by total assets. The net result is derived from the company's income statement and is the result after tax. Assets are read from the balance sheet and comprise liquid assets, inventory, land, capital utilization depreciated and the value of intellectual property, such as patents. Businesses acquired may also have a category called "goodwill" which pays extraordinary money to the company over its own book value at the acquisition date. Because assets will tend to fluctuate over time, average assets must be used for the period to be measured. Thus, ROA for the quarter should be based on quarterly earnings divided by average assets in the quarter. ROA is a ratio, but usually presented as a percentage (Bernstein et al., 2000).
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Empirical Review

Maimuna and Rashad (2013) analyzed the positive association between spending on human capital and profits in these expenditures on education, training and development, increasing productivity by twice the amount of the trainee's salary increase. In fact not all the production activities are inculcated in training are compensated by the increase in individual remuneration, as such investments remain beneficial for organizations (Gene, 2008).

He noted the positive impact of the new management initiative, examining the general turnover of supervisors in the twelve-month period that was trained, which resulted in savings of $ 2.3 million. He also stressed that the training also improved the audit performance in the company's smaller factory to 8.9 compared with 7.3 on a 10-year scale.

Recently, scientists such as Salman and Tayib (2013) studied the connection between spending on human capital and financial performance in 50 public companies in Nigeria and to provide evidence of connection between two variables that further demonstrated that human capital spending affects the efficiency of the sample of companies is positive.

Ahangar (2011) and Okwy & Christopher (2010) found that human capital is important both in the financial performance of the company and in future benefits, using cost models and economic approaches. However, Shrader and Siegal (2007) pointing that concept of human capital is like other assets, since they are acquired to generate future benefits, therefore, they should be treated as asset. They have a habit of destroying money, knowledge of skills and knowledge of human capital.

METHODOLOGY

The study is correlational design in nature. Correlation design is a quantitative approach of research where it contains multiple quantities (variables) from the same group and tries to determine the relationship between them. The population of the study revolves round oil and gas companies in Port Harcourt – AGIP, Shell, ExxonMobil.

This work was subjected to Taro Yamane formula with 95% confidence level at 5% significance level. The population of 1200 was adopted.

\[
N = \frac{N}{(1 + N)(e)^2}
\]

Where :

- \(n\) = sample size required
- \(N\) = number of people in the population
- \(e\) = allowable error (%)

Substituting the value of 1200 into the equation

\[
= \frac{1200}{(1 + 1200)(0.05)^2}
\]

\= 399.66 approximately 400 sample size.

Model specification

Return on Asset (ROA) = f(human asset expenditure)

Return on asset is the function of human asset expenditure/

Introducing the proxies variables

ROA – (CEXP; REXP) = F(HAE)

ROA = Do + \(\beta_1\)CEXP + \(\beta_2\)REXP

The model equation is thus;
**Data Analysis and Results**

Answer to research question 1 and 2.

*Research question 1:* What is the relationship between capital expenditure and return on asset?

**Table 1** Descriptive Analysis of research question 1

<table>
<thead>
<tr>
<th>S/N</th>
<th>Question</th>
<th>Strongly Agree (SA)</th>
<th>Agree (A)</th>
<th>Disagree (D)</th>
<th>Strongly Disagree (SD)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Capital expenditure increases return on asset on long run.</td>
<td>171(42.75%)</td>
<td>111(27.75%)</td>
<td>27(6.75%)</td>
<td>31(7.75%)</td>
<td>Significant</td>
</tr>
<tr>
<td>2</td>
<td>Capital expenditure reduces return on asset at short run</td>
<td>48(12%)</td>
<td>36(9%)</td>
<td>151(37.75%)</td>
<td>105(26.25%)</td>
<td>Insignificant</td>
</tr>
<tr>
<td>3</td>
<td>Recruitment cost enhances return on asset at long run.</td>
<td>141(35.25%)</td>
<td>117(29.25%)</td>
<td>32(8%)</td>
<td>50(12.50%)</td>
<td>Significant</td>
</tr>
<tr>
<td>4</td>
<td>Amortization of capital expenditure helps to increase return on asset at long run.</td>
<td>128(32%)</td>
<td>131(32.75%)</td>
<td>54(13.50%)</td>
<td>27(6.75%)</td>
<td>Significant</td>
</tr>
<tr>
<td>5</td>
<td>Amortization of capital expenditure helps to increase return on asset at short run.</td>
<td>33(8.25%)</td>
<td>62(15.50%)</td>
<td>121(30.25%)</td>
<td>123(30.75%)</td>
<td>Insignificant</td>
</tr>
</tbody>
</table>

Table 1 contained the descriptive analysis result of research question 1. Question item 1 shows that capital expenditure increases return on asset (ROA) on long run with respondent rate of 171(42.75%) and 111(27.75%) “SA” and “A” with the assertion. While 27(6.75%) and 31(7.75%) “D” and “SD” with the assertion. Question item 2 reveals that Capital expenditure reduces ROA on short run with respondent rate of 48(12%) and 36(9%) “SA” and “A” with the statement while the 151(37.75%) and 151(37.75%) “D” and “SD” with the assertion. Question item 3 reveals that recruitment cost enhances ROA at long run respondent rates of 141(35.25%) 117(29.25%) “SA” and “A” while 32(8%) and 50(12.50%) “D” and “SD” with the statement. Question item 4 posits that amortization of capital expenditure helps to increase ROA at short run with the respondent rate of 128(32%) and 131(32.75%) “SA” and “A” with the question statement while 54(13.50%) and 27(6.75%) “D” and “SA with the question statement it then implies that amortization of capital expenditure increases ROA at long run. Question no 5 shows that amortization of capital expenditure helps to increase ROA at short run with respondent rates of 33(8.25%) and 62(15.50%) “SA” and “A” with the statement while 121(30.25%) and 123(30.75%) “D” and “SD” with the statement. This connotes that amortization of capital expenditure does not helps increase ROA at short run.
Research question two: What is the relationship between revenue expenditure and return on asset?

Table 2 Descriptive analysis of research question 2

<table>
<thead>
<tr>
<th>S/N</th>
<th>Question</th>
<th>Strongly Agree (SA)</th>
<th>Agree (A)</th>
<th>Disagree (D)</th>
<th>Strongly Disagree (SD)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Revenue expenditure distort return on investment.</td>
<td>66 (16.50%)</td>
<td>35 (8.75%)</td>
<td>135 (33.75%)</td>
<td>104 (26%)</td>
<td>Insignificant</td>
</tr>
<tr>
<td>7</td>
<td>Return on investment is affected by increase in employee package.</td>
<td>45 (11.25%)</td>
<td>39 (9.75%)</td>
<td>148 (37%)</td>
<td>108 (27%)</td>
<td>Insignificant</td>
</tr>
<tr>
<td>8</td>
<td>Wages and salaries affects return on investment.</td>
<td>138 (34.50%)</td>
<td>118 (29.50%)</td>
<td>34 (8.50%)</td>
<td>50 (12.50%)</td>
<td>Significant</td>
</tr>
<tr>
<td>9</td>
<td>Optimal employee commitment result to increase return on investment.</td>
<td>127 (31.75%)</td>
<td>132 (33%)</td>
<td>52 (13%)</td>
<td>29 (7.25%)</td>
<td>Significant</td>
</tr>
<tr>
<td>10</td>
<td>Revenue expenditure is seen at as intangible asset but expenses to the organization</td>
<td>27 (6.75%)</td>
<td>68 (17%)</td>
<td>119 (29.75%)</td>
<td>125 (31.25%)</td>
<td>Insignificant</td>
</tr>
</tbody>
</table>

Table 2 revealed descriptive result of research question four showing the relationship between revenue expenditure and return on asset. Question no. 6 shows that revenue expenditure distort return on investment with respondent rate of 66(16.50%) and 35(8.75%) “SA” and “A” with the statement while 135(33.75%) and 104(26%) “D” and “SD” with the statement. Question no. 7 reveals that ROE is affected by increase in employee package with respondent rate of 465(11.25%) and 39(9.75%) “SA” and “A” and 148(9.75%) and 108(27%) “D” and “SD” with the statement. Question no 8 reveals that wages and salaries affects ROE positively with respondent rate of 138(34.50%) and 118(29.50%) “SA” and “A” with the assertion while 34(8.50%) and 50(12.50%) “D” and “SD” with the statement. Question no. 9 opines that optimal employee commitment result to increase ROE with respondent rate of 127(31.75%) and 132(33%) “SA” and “A” with the statement while 52(13%) and 29(7.25%) “D” and “SD” with the statement. Question no. 10 reveals that revenue expenditure is seen at an intangible asset but expenses to the organization with respondent rate of 27(6.75%) and 68(17%) “SA” and “A” with the assertion while 119(29.75%) and 125(31.25%) “D” and “SD” with the statement.

Hypothesis 1: There is no significant relationship between capital expenditure and return on asset.

Table 3 Linear Regression Result of hypothesis 1

<table>
<thead>
<tr>
<th>Mode</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of R</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.988**</td>
<td>.918</td>
<td>152.42133</td>
<td>.918</td>
<td>.922006</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), CEXP
b. Dependent Variable: ROA

Table 3 contained the result of hypothesis 1 revealed that there is significant relationship between capital expenditure and return on asset at correlation coefficient of r .988** and r² .918 at 5% level of significance. This implies that we accept the alternate hypothesis and reject the null hypothesis because r is greater than 0.05 level of significance,
which states that there is significant relationship between capital expenditure and return on asset. The Durbin-Watson statistic of 3.006 is statistically significantly because it is greater than the criterion value of 2.0 for decision making, this illustrates the presence of autocorrelation in the model specification.

**Research hypothesis 2:** There is no significant relationship between revenue expenditure and return on asset.

**Table 4 Linear Regression Result of hypothesis 2**

<table>
<thead>
<tr>
<th>Mode</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.016a</td>
<td>.045</td>
<td>.061</td>
<td>141.00819</td>
<td>745.882</td>
<td>1.008</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), REX
b. Dependent Variable: ROA

Table 4 expressed the result of hypothesis 2 which revealed that there is no significant relationship between revenue expenditure and return on asset at correlation coefficient of r 0.16a and r² 0.45 are greater than the decision criterion. From the decision rule, it implies that we reject the alternate hypothesis and accept the null hypothesis because r is less than 0.05 level of significance, which states that there is no significant relationship between revenue expenditure and return on investment. The Durbin-Watson statistic of 1.008 is not statistically significantly because it less than the criterion value of 2.0 for decision making, this illustrates the absence of autocorrelation in the model specification.

**DISCUSSION OF FINDINGS**

From the descriptive result of research questions 1 to 2 revealed that human capital expenditure has positive relationship with return on asset. The criterion used for decision making is at 5% level of significance. Hypothesis 1 result revealed capital expenditure influenced return on investment at r .988a. The result of hypothesis 2 reveals showed that revenue expenditure has not influence on return on investment at r.016a at 5% level of significance.

In summary, human asset expenditure has great role to play in return on asset of oil and gas companies. The sustainability of oil and gas production anchors on human resources unit. Capital expenditures should be transferred to statement of financial position as one of the intangible assets while revenue expenditures should be charged to profit or loss as management expenses. The present study is in agreement with the works of Maimuna&Rashed (2013) and Salman &Tayib (2013). Hence, Shrader and Siegal 92007) believed that human capital asset is like other intangible asset which improve the revenue of organization significantly.

**CONCLUSION**

Human asset is an important tool for human resources accounting which is gaining popularity in the accounting practice. The human capital expenditures is seen as asset and charged to statement of financial position as intangible assets and depreciated over the stated life span of the human asset. Revenue expenses consist of salaries, wages and welfare costs for employees. In the same vein, revenue expenditure should be posited to expenses in the statement of profit or loss. From the results point of view of data analysis human asset expenditure greatly influenced financial performance as argued by so many scholars, the study concluded that the accounting practice of expensing every expenditure

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on human asset does not present the correct and transparency view of statement of financial position.

**RECOMMENDATIONS**
From the results, the following were recommended;

i. That cost of training and development should be capitalized and charged to the statement of financial position and be disclosed as intangible asset.

ii. Wages and salaries/other benefits should be disclosed as management expenses in the statement of profit or loss.

iii. That oil and gas companies should minimize their cost of human asset expenditure in order to optimize profit.

**REFERENCES**


