

## Human Resource Accounting and Decision Making in Post-Industrial Economy

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### Abstract

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This study was carried out to investigate the probable effect of Human Resource Accounting on the decision making process and business valuation method on the premise that firms in post industrial economy operate within a competitive economic environment which require timely, effective and efficient decisions to ensure success and survival. The study which is empirical was carried on 16 publicly quoted Nigerian Banks using the Ex-post facto research design. The instruments of data collection were questionnaire designed on 6 point Likert scale and validated through peer review with the Crombach Alpha pilot test returning 0.88 and 0.70 respectively for Human Asset and Decision Making variables. The hypotheses were tested with statistical regression analysis which presented a significant effect of human asset accounting on management decision at  $F=121.977$  with p value of 0.00 significance while the  $R^2$  value and the adjusted  $R^2$  returned 0.341 and 0.338 respectively. Based on these findings the study concluded that there is need to value Human Asset and reflect this value in the financial statement like other intangible assets. This is the only through path towards complete business information goal congruence.

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**Keywords:** Human Resources Accounting, Human Asset, Decision Making and Post-Industrial Economy

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## **1.0 Introduction**

Today's high dependency on information and communication technology has indeed made the world a global village. This eventually led to the transformation of the world's economy from industrial economy to post industrial economy. According to Flamholtz (1999), there is growing recognition that over the past few decades, most of the world's advanced economies have made a gradual yet fundamental transformation. They have shifted from industrial economies where plant and equipments were the core assets, to post-industrial economies where intellectual property, specifically human capital, is the core asset.

In industrial economy the emphasis was on manufacturing capacity of an organisation for success and survival. This means that little or no recognition was given to the intellectual capability of human capital. However, the post industrial economy emphasises intellectual capability as the core of the organisational survival in a competitive economic environment. For post industrial era as confirmed by Flamholts (1999) the potential success of an organization lies in its intellectual capabilities rather than in its physical assets.

It is a common economic fact that modern organisations operate within a competitive economic environment which require that their management make timely, effective and efficient decisions driven only by the intellectual capacity of the human capital to ensure survival and success in the face of stiff competitions. This as posited by Grant (2001) buttressed the fact that differences in profitability within industries are much more important than those between industries. He further affirmed that the reasons are that, international competition, technological change, and diversification by firms across industrial boundaries have meant that industries which were once cosy havens for making easy profits are now subject to vigorous competitions. Thus the development of human capital for effective and efficient decisions has become paramount for organisations to survive. This fact is also supported by Marimuthu, Arokiasamy & Ismah (2009) where they stated that, to develop a competitive advantage, it is important that firms truly leverage on their workforce as a competitive weapon. They noted in their study that a strategy for improving workforce productivity in order to drive higher value for the firms has become an important focus.

The above implies that the human resources which make up the intellectual capital of an organisation have a vital role to play in the various management decision making process of such organisation and for this reason human beings are regarded as the most important asset of an organisation. Olaniyan and Lukas (2008) confirmed this when they said human resources are the most valuable assets of any organisation, with machines, materials, and even money, nothing get done without manpower.

As important as the asset is considered to be to the organization, it is, nevertheless, always neglected in the valuation of the assets of a firm. This paper opines that it is necessary to establish and record the value of this intellectual part of human workforce within the organization in order to fully appreciate the true value of a firm's productivity. The concern of this paper, however, is that even in the face of the plethora of literature supports for human capital recognition as the most important asset of an organisation yet unlike other physical assets it is not recognised in the financial statement as assets. According to Fajana (2004) companies rely on qualified and dedicated workers for optimum performance yet this importance is often belittled by a sketchy one-sentence remark in most annual reports, usually at the tail-end of the board chairman or company president's statement. The problem here is that if human capital is considered as part of organisations' assets and it is not treated as such in the organisations financial statement, it simply means that the financial statements are not presenting a true picture of the organization's state of affairs thus could be rightly be said to be misleading. Since a financial statement is one of the decision making tools of its users, it implies that whatever decisions made based on them would equally be affected its untrue nature.

This paper aims at investigating the probable effects of human resource accounting on users of financial statement in decision making process especially as it affects investment decisions and human resource related policies. On this basis the following research question was raised to guide our investigation:

To what extent can human asset accounting reflect on the measurement and effects of investments appraisal and managerial employment decisions?

Our guiding research hypothesis is stated thus:

**H<sub>0</sub>**: Human asset accounting has no significant effect on investment and employment decisions of management.

## 2.0 Literature Review

### 2.1 Concept of Human Resources Accounting

Bullen and Eyer (2010), state that Human Resource Accounting involves accounting for expenditure related to human resources as assets as opposed to traditional accounting which treats these costs as expenditures that reduce profit. Woodruff (1973) defined Human Resources Accounting as the identification, accumulation and dissemination of information about Human Resources in dollar or Naira term. He further explained that Human Resources Accounting is the systematic accumulation of information about changes in investments made in human resources and reporting back that information to operating managers in order to assist them to make better decisions than they would have been able to make without such additional information.

Raghav (2011), states that Human Resources Accounting is a method of measuring the effectiveness of personnel management activities and the use of people in an organization. Parameswaran and Jothi (2011) referred to the American Accounting Association's definition of human resources accounting as the measuring of data of human resources and communicating the information to the interested parties. Going by the various definitions above, human resource accounting in simple term is accounting for the value of people in organization to enhance information for decision making by the users of financial information.

Parameswaran and Jothi (2005), identified and categorized the objectives of human resources accounting into three considering the needs of the various users of financial information as Internal, Internal and External, and External.

The **internal objectives** relate to the improvement of the internal management of human resources in an organization, while the **Internal and External objectives** of human resources accounting are designed to meet specific information requirements of both the internal and external users of financial statements.

The **external objectives** on the other hand are specific objectives that are designed to meet financial information requirements that are peculiar to the external users of financial statements.

## 2.2 Concept of Training and Development

Armstrong (2005) defined training as the formal and systematic modification of behaviour through learning which occurs as a result of education, instruction, development and planned experience. According to him training is aimed at helping the organization achieve its purpose by adding value to its key resources who are people it employs. Armstrong (2005) also confirms training to be investments in people to enable them perform better and to empower them to make the best use of their natural abilities. In support of Armstrong, Obi and Zakari (2005) identified the main purpose of training and development to be that of removing performance deficiency, whether current or anticipated, that caused employees to perform at less than the desired level.

Campbell (1971) in Obi and Zakari (2005) distinguishes training from development. He stated that training is designed for non managers and for short term and stated purpose, while development is broader in education and aimed at managerial personnel and for long term. Oke (2010) opines that many organizations especially the multinationals rely on the strategy of staff development to ensure that corporate goals and objectives are met.

Armstrong (2005) was more explicit in his opinion that effective training programmes help organizations to minimize learning cost; improve individual, team and corporate performance in terms of output, quality, speed and overall productivity; enhance operational flexibility by extending the range of skills possessed by employee (multi-skilling); attract high quality employees by offering the learning and development opportunities, increasing their levels of competence and enhancing their skills, thus enabling them to obtain more job satisfaction to gain higher rewards and to progress within organization; increase the commitment of employees by encouraging them to identify with the mission and objectives of the organization; assist in change management by increasing understanding of the reasons for change and providing people with the knowledge and skills they need to adjust to new

situations; develop a positive culture in the organization that is oriented towards performance improvement; provide higher levels of service to customers.

### 2.3 Concept of Decision Making

Koontz and Weihrich (2010) defined decision making as the selection of a course of action from among alternatives. They further stated that, decision making is at the core of planning. This means a plan cannot be said to exist unless a decision – a commitment of resources, direction, or reputation has been made. Most of the times managers see decision – making as their central job because they must constantly choose what is to be done, who is to do it, when, where, and occasionally how to do it. Thus decision making is a step in planning, even when such decisions are taken so quickly with little thought or when it influences actions only a few minutes, it is still part of planning. Decision making is a daily phenomenon in the life of either the individual or corporate organisation, a course of action can seldom be judged alone because virtually every decision must be geared to other plans. According to Simon, Dantzig, Hogarth, Plott, Howard, Schelling, Shepsle, Thaler, Tversky, and Winter (1987) the work of managers, scientists, engineers, lawyers and the work that steers the course of society, and its governmental organisation is largely work of making decisions and solving problems. Mosley, Pietri & Megginson (1996) explained that decision making is an exercise that individual and managers undertake in their daily activities to take advantage of opportunities and solve problems as they arise. However they broadly classified decision making into programmed and non programmed decisions.

According to Koontz and Weihrich (2010) decision making is a process involving the following the steps of premising, identifying alternatives, evaluating alternatives in terms of the goal sought and choosing an alternative that will best achieve the goal.

#### 2.4.0 Theoretical Frame Work

The theoretical frame work of this study postulates that it is the intellectual part of human beings which drives organisation that constitute the assets in them and that the quality of this intellectual capital also determines the quality of decision that are made at various levels of organisation by employees who are the source of competitive advantage which ultimately reflects in corporate performances.

Thus this study considers two theories; the Human Capital Theory and the Decision Theory as the pillar on which it is structured.

#### 2.4.1 Human Capital Theory

Another theory that support this study is the Human Capital theory proposed by Schultz (1961) and extensively developed by Becker (1964). The theory has its roots from labour economics which is a branch of economics that focuses on general work force in quantitative term. According to the theory, Human capital theory contends that education or training raises the productivity of workers by imparting useful knowledge and skills, thus raising workers' future income as well, through increase in their lifetime earnings. The theory postulates that expenditure on education or training and development is costly, and should be considered as investment since it is undertaken with a view to increasing personal incomes. Human capital approach is used to explain or support occupational wage differential.

However, the position of this study is that education or training and development would not only increase employee personal income, it would also serve as a means of achieving corporate competitive advantage which reflects ultimately in organisational performance; and if asset is considered as any expense which benefit is derived beyond one financial year, then it follows that expenses incurred in training and developing the human resources of an organization qualifies to be so called and treated in its books since the benefits from such costs usually last for many financial periods.

Flamholtz and Lacey (1981) as noted by Baney and Wright (1997), opined that human capital theory distinguished between general skills and firm specific skills of human resources. General skills are skills possessed by individuals which provide value to a firm and are transferable across a variety of firms. For instance, all competitor firms have the potential to accrue equal value by acquiring employees with knowledge of general management, the ability to apply financial ratios, or general cognitive ability. On the other hand specific skills, provide value only to a particular firm, and such skill are of no value to competing firms. An instance of this is the knowledge of how to use a particular technology used only by one firm, or knowledge of a firms policies and procedures provided to that firm, but usually would not be valuable to other firms.

In the view of Becker (1964) Human Capital is similar to **physical means of production** like factories and machines. One can invest in human capital through education, training and even medical treatment while one's output depends partly on the rate of return on the human capital one owns.

Thus, human capital is a means of productions into which additional investment yields additional output. Human capital is substitutable, but not transferable like land, labour or fixed capital.

The relevance of this theory to the study is that it considered the cost of education, training, development and even workers medical treatment as investments which are expected to reflect in increased or improved productivity of individual workers. Thus, if these are investments like other physical assets which are reflected on the balance sheet considerable effort must be made to also reflect such value of human capital on the balance sheet.

#### 2.4.2 Decision Making Theory– Subjective Expected Utility (SEU) Theory

This theory also forms the pillar of this study. The theory postulates that the quality of human capital available in organizations reflects the quality of decisions and choices made thus, such decisions ultimately result in organisation performance. The development of subjective expected utility theory (SEU) was a major intellectual achievement which gave for the first time a formally axiomatic statement of what it would mean for an agent to behave in a consistent, rational manner.

It assumed that a decision maker possessed a utility function which is an ordering of all possible outcomes of choices by preference, that all alternatives among which choice could be made were known, and the consequences of choosing each alternative could be ascertained (or in the version of the theory that treats choice under uncertainty, it assumed that a subjective or objective probability distribution of consequences was associated with each alternative). By applying subjectively assigned probabilities, SEU theory opened the way to fusing subjective opinions with objective data, an approach that can also be used in man-machine decision-making systems. In the probabilistic version of the theory, Baye's rule prescribes how people should take account of new information and how they should respond to incomplete information.

The assumption of SEU theory is very strong, permitting correspondingly strong inferences to be made from them. Although the assumptions cannot be satisfied even remotely for most complex situations in the real world, they may be satisfied approximately in some microcosms – problem situations that can be isolated from the world's complexity and dealt with independently.

For example, the manager of a commercial cattle feeding operation might isolate the problem of finding the least expensive mix of feeds available in the market that would meet all nutritional requirements of his cattle. The computational tool of linear programming, which is a powerful method for maximizing goal achievement or minimizing cost while satisfying all kinds of side conditions (in this case, the nutritional requirements), can provide the manager with optimal feed mix within the limits of approximation of his model to real-world conditions. Linear programming and related operations research techniques are now used widely to make decisions whenever a situation that reasonably fits their assumptions can be carved out of its complex surround. These techniques have been especially valuable aids to middle management in dealing with relatively well structured decision problems.

Most of the tools of modern operations research – not only linear programming but also integer programming, queuing theory, decision trees, and other widely used techniques – use the assumptions of SEU theory and this makes the theory relevant for this study.

## 2.5.0 Empirical Frame Work of the Study

### 2.5.1 Human Resource Accounting and Decision Making

Since almost every literature on human resources points at people in organization as the greatest assets of organizations and this fact is also declared in the organizations' mission statements, annual reports and at companies annual general meetings (AGM), it therefore becomes imperative to look at the relationship between human capital and decision making in organization. Since human beings control and drives every other resources of organization, the quality of decisions made by them may either directly or indirectly reflects on the organization performance.

The study of Becker and Huselid (1997) as referred to by Kajola and Adedeji (2011) corroborated this assertion when they found a strong relationship between the quality of human capital and subsequent financial performance.

According to the study conducted by Okpala and Chidi (2010) it is believed that a well developed system of human resource capital accounting could contribute significantly to internal decision by management and external decisions by investors. Information on investment and value of human resources is useful for decision making in the enterprise.

Thus they concluded in their study that human capital accounting is highly significant to investor in making relevant investment decisions and that the inclusion of human capital accounting in financial reporting is desirable to aid investors in making rational decisions. They also recommend the need to address the issues of human capital development at both the micro and macro levels and that human capital value should be included in the balance sheet of Nigeria organizations to aid investment decisions.

In Asia, Fariborz and Raiasheka (2011) in their study conducted on Iranian companies concluded that lack of Human Resources Accounting (HRA) disclosures in financial statements will lead to obliquity of users. According to them the study results show that the use of HRA information in financial statement has incremental impact on individuals' decision-making process in order to stock investment statistically.

Their result also revealed that HRA information can play a critical role in internal managerial decision making and its measures can be used to show that investment in company's human resources may result in long-term profit for the company.

Herman and Mitchel (2008) also reported that a comprehensive treatment of expected cost from human resource policies would provide external and internal financial analyst with different and useful information. Flamholtz, Bullen and Hua (2003) reported that human resource accounting provides the upper level management with an alternative accounting system designed to measure the cost and value of people to an organisation.

According to them HRA represents both a paradigm (a way of viewing human resource decisions and issues) and a set of measures of quantifying the effects of human resource management strategies upon the cost and value of people as organisational resource.

They referred to other studies conducted by Elias (1972), and Hendricks (1976), all of which found a significant association between HRA and decision making. Their study results further indicated the following:

That background and experience has impact on decision-making based on HRA information, even though in the researchers' opinion, this could be as result of different culture and that a significant relationship exist between the individual view points about the evaluation of human resources and the impact of HRA information on the investment decisions.

Furthermore, decision making is part of management practices and theory. However the study conducted by Keller (2009) on the effect of Management practices on the economic performance of firms established that the outcome of the literature review demonstrated that management practices have a direct impact on firm performances. He also referred to the findings of Bloom and Van Reene (2007) which illuminates the correlation between management decisions and firms economic performance. Specifically Bloom and Van Reene (2007) as cited by Keller (2009) were able to establish that management practices has a significant effect on the economic performances of family owned and operated firms as well as privately owned firms in south-east Wisconsin at the 607 level of significance.

The study of Malmendier and Tate (2005) supports the assertions in this study that quality of managers or workers in organisations which of course may be determined by the level of training and developments received by them affects quality of decision making which ultimately reflects on the corporate performance. They argued that managerial overconfidence can account for corporate investment distortions.

Overconfident managers according to the work, overestimate the return on their investments projects, they view external fund as unduly costly and for this reasons they over invest when they have abundant informal funds but curtail investment when they require external finance.

They were able to establish that investment decisions of overconfident CEOs are significantly more sensitive to cash flow particularly in equity dependant firms. The findings of this study support that the client financial officers and CEO of an organisation must know optimal investment decisions that will enhance corporate performance and this of course can be through training and development of these CEOs and financial managers.

However, the existing Accounting Standards - the local Statement of Accounting Standard (SAS), International Accounting Standard (IAS) and the recent International Financial Reporting Standards (IFRS) did not specifically provide for the treatment of human assets in financial statement. This study shared the view that there is a relationship between intellectual capital and decision making. Thus, it is set to evaluate the significance effect of treating recruitment training and development expenditure as investment rather than cost, on managerial decisions in order to contribute to the debate on this body of knowledge. Consequently, we can infer from the little review of the above related literatures that:

- Every organization recognizes the fact that human resources are assets that are germane to the success of the organization;
- Unlike the physical assets that are recognized in the financial statement human assets are not recognized in the financial statement;
- There is no specific provision in the accounting standards either in the local or international accounting standard for the treatment of human assets in the books of accounts;
- The human Capital theory supports the view that human capital is an important asset in organisation;
- There exists a correlation between management decision and firm performance;
- Lack of human resources information disclosure affects investors decisions;

However, the gaps in the literature that this study intends to fill are also identified as follow:

- to identify and highlight distortions in organizations' financial statements due to the use the current accounting practice of expensing the expenditures on recruitment training and development cost rather than capitalizing them thereby misrepresenting the true picture of the organisation's financial position;

- to show how a misleading financial report will result into wrong management decisions which may have adverse effects on organizations' performance.

### 3.0 Research Methodology

This paper is based on an empirical study conducted using 16 publicly quoted Nigerian banks. The instrument for data collection were questionnaire designed on a 6 points likert scale and administered on the banks head office targeted at the staff of Human Resource, Accounting, and Audit/Internal Control departments which were considered to be the relevant departments for this study. 60% (238) out of the 400 questionnaire distributed to them were returned and analyzed using a simple regression analysis model and validated using ANOVA and F ratio.

#### 3.1 Data Analysis and Discussion

The simple regression analysis model was oprationalized as follows:

Regression Model:  $Y = a + bx$

Where Y = Management Decision

a = Constant

x = Human Asset

Table 1: Effect of application of human asset accounting on management decision in the area of investment decision, human resources polices like layoff, and hiring and rehiring of workers

Model	Sum Of Squares	Df	Mean Square (Ms)	F-Ratio	Sig.	R <sup>2</sup>	Adjusted R <sup>2</sup>
Regression	273.973	1	273.973	121.977	0.000	0.341	0.338
Residual	530.082	236	2.246				
TOTAL	804.055	237					

Source: Researcher's Field Survey Result (2012)

Table 2: Parameters of Estimates of the Relative Contribution Identified Variable (Human Asset) to the Management Decision

Model	Unstandardized Co-Efficients		Standardized Co-Efficients	t	Sig.
	B	Standard Error (SE)			
Constant	4.255	0.983		4.327	0.000
Human Asset	0.163	0.15	0.584	11.044	0.000

Source: Researcher's Field Survey Result (2012)

Table 1 above shows that human asset significantly affects managerial decisions in terms of investment decisions, and human resource related policies, as indicated by the F-Ratio value of 121.977,  $p = 0.000$ , with  $R^2$  value and the adjusted  $R^2$  at 0.341 and 0.338 respectively. In this case, we reject null hypothesis because the  $p$  value is  $< 0.05$ . The  $R^2$  value of 0.341 represents the rate of changes in management decision that is accounted for by organizations' human asset. Thus the result shows that human asset contribute at least 34% to management decisions.

Furthermore, table 2 shows that the  $\beta$  value of human asset which is the independent variable in the regression model stated above is 0.163, with  $p \leq 0.000$ .

This an indication that human asset has a significant contribution to management decisions. Thus the regression model above can be re stated by substituting the "a" and "b" values in the regression model as follows;

$$Y = 4.255 + 0.163 (\text{Human Asset})$$

The above findings agree with the findings of Okpala and Chidi (2010) who established from their study that a well developed system of human resource capital accounting could contribute significantly to internal decisions by management and external decisions by investors. This implies that human asset in organization could either make or mar organization in terms of decision making because it does not matter how much physical asset an organization has without human asset to drive it and make good decisions it will not lead such organization to anywhere in terms of performance. Thus Okpala and Chidi concluded that including human capital accounting in financial reporting is desirable in order to aid investors in making rational decisions

Also the study of Fariborz and Raiasheka (2011) on Iranian companies supported the above findings. The results of their findings revealed that human resources accounting (HRA) information can play a critical role in internal managerial decision making and its measures can be used to show that that investment in company's human resources may result in long term profit for the company. The submission of Mitchell (2008) is also in line with this, he also reported that a comprehensive treatment of expected cost from human resources policies would provide both the external and internal financial analyst with different and useful information. Such information however, is to assist the user who may be the management or the internal or external analyst as the case may be in making rational decisions that will enhance the organization's performance. Keller (2009) recognizes decision making as part of the management practices and theory and he established that management practices have a direct impact on firms' economic performance. Elias (1972), and Hendricks 1976 both supported the fact that human asset accounting has a significant association with decision making.

#### **4.0 Conclusion and Recommendations**

Considering the result of the statistical analysis which revealed that human asset significantly affects management decisions as supported by various empirical findings and relevant literatures which also considered employees as important asset critical to the survival of organisations within the competitive economic environment, there is need for this assets to be valued and capitalised like other intangible assets, like goodwill that are captured on organisations balance sheets or statement of financial position.

Again, since it is now mandatory for companies in most part of the globe to adopt the International Financial Reporting Standards (IFRS) which has fair value measurement as one of its cardinal requirements in revenue recognition, it is only wise and proper if the human asset aspect is brought in to balance the effect on the financial statement.

Otherwise, the financial information of organisation based on the current accounting treatment of employees related cost will continue to be distorted and for this reason decisions based on them might be on a wrong premise which might adversely affect organisations performance especially in this era of globalisation.

From the aforementioned, this paper recommends the capitalization of all relevant recruitment, training and development expenditure in line with the treatment for all other assets while the International Financial Reporting Standards should consider incorporating the capitalization of human assets costs in order to enhance fair reporting and engender better quality financial information base for decision making in business organisations.

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Human resource accounting (HRA) is the process of identifying and reporting investments made in the human resources of an organization that are presently unaccounted for in the conventional accounting practice. It is an extension of standard accounting principles. Measuring the value of the human resources can assist organizations in accurately documenting their assets. In other words, human resource accounting is a process of measuring the cost incurred by the organisation to recruit, select, train

**Keywords:** Human Resources Accounting, Human Asset, Decision Making and Post-Industrial Economy.

### 1.0 Introduction

Today's high dependency on information and communication technology has indeed made the world a global village. This eventually led to the transformation of the world's economy from industrial economy to post industrial economy. According to Flamholtz (1999), there is growing recognition that over the past few decades, most of the world's advanced economies have made a gradual yet fundamental transformation. They have shifted from industrial economies where plant and equipments Human capital is analyzed as a factor and determinant of economic development of society on the whole and public production development in particular. The aim of this article is to define the role and significance of human capital in innovative economy. Dynamics of modern processes in the new global economy can be characterized by being innovative, having innovative instruments, presence of endogenous relations of science factor in expended reproduction and growing research intensity of economic progress. Contribution of scientific and technological progress in increase of gross domestic pro