

Full Length Research Paper

The yes, no decision is easy now: Is human capital accounting challenge for accountants

Ijaz Hussain Bokhari*, Tahir Masood Qureshi, Faud Bashir and Syed Tahir Hijzi

University of Central Punjab, Lahore, 1-Khayaban-e-Jinnah Road, M.A. Johar Town, Lahore, Pakistan.

Accepted 15 June, 2011

Human resource accounting (HRA) is an old concept in corporate and academic research while new in economics. This study explores new dimension for valuation of human capital asset (HCA), through parallel comparison with international financial reporting standards (IFRS). During the study, few weaknesses were identified in conventional accounting standards. Based on these finding, new model for valuation of HCA was developed. The objective of this study was to encourage both researchers and professionals to implement HRA concept in business world. Based on the observations, it is concluded that in current era businesses consider HRA as an effective tool to manage human resource (HR).

Key words: Human resource accounting (HRA), human capital asset (HCA), human resource (HR), IFRS/IAS earnings; NBM, net benefit model.

INTRODUCTION

According to Polanyi (1962), "Human assets are hard to imitate due to scarcity, specialization and tacit knowledge". Globalization fetch the whole business world under one roof and sometimes the whole world is taken as one single unit or single zone which is occupied by business competitors. As International Financial Reporting Standards (IFRS) markets are interconnected, all over the world, World Trade Organization (WTO) provides the facilities to different industrialized countries in creation of environment which causes boundary less trade, internal and external liberalization of capital. In this current era, sustainable competitive advantage is one of

the biggest challenges faced by the national as well as for multinational organizations. It is argued that the degree and impact of human interaction after globalization, effect in such ways that give rise to numerous new developments all over the world was made in human development especially in the current era (Alli, 2007). Traditionally, the attainment of sustainable competitive advantages was based on different resources like, property, plant and equipments, experimental laboratories, financial resources for productions and value chain which consist on the primary and supporting activities for distributions. It is acknowledged that success of businesses depends upon its specific assets which cannot be imitated or duplicated by the competitors, which personnel acquired by the enterprises. That is the reason some organizations are in position to maintain competitive advantage over others, with utilization of same Information Technology (IT), resources and only human capital which make the differences. People/employees are considered as strategic assets all over the world; other assets are considered as commodities which are available for the sale and purchase in the open market with the specific price, and only the human capital has the potential to learn, grow, and contribute (Fitz-enz, 1995). Human resources (HR) development cannot be undervalued in spite of

*Corresponding author. E-mail: cancer_005@hotmail.com Tel: +92-42-35880007/+923219786984

Abbreviations: HRA, Human resource accounting; HCA, human capital asset; IFRS; International Financial Reporting Standards; HR, human resource; WTO, World Trade Organization; IT, Information, Technology; IAS, International Accounting Standards; IASB, International Accounting Standards Board; AAA, American Accounting Association; NFRS, National Financial Reporting Standards; OCM, opportunity cost method; CBP, competitive bid price; HCM, historical cost method; PVFE, present value of future earnings.

tremendous expansion and development in information technology sector, while IT development cannot so much contribute in the economic success in all over the world as HR development can do. In other words, "the significant and most vital and valuable asset for any companies are its employees, because strategic plans are converted into actions based on the people" (Darling, 1999).

Therefore, HR management practices deals with the recruitment and selection, training and development, employees' performance appraisal system, career planning system, compensation system, employees' participation and finally employees' retention. HR is one of the major components of organization's total wealth which has the ability to generate economic rent in the market. Accounting is a tool used by organizations to calculate the value of any organization which is based on the tangible and non-tangible resources within the concept of generating and communicating wealth of companies (Meyer, 2007).

However, financial statements are widely used as a source of information to analyze the financial position of companies. Even, the economies are emerging and new theories are being introduced due to rapid economic growth; financial markets are going to be more complex due to the new financial instruments but accounting practices are not kept the pace with rapid changes in corporate world and economic expansion.

International accounting standards (IAS)/IFRS are issued by the International accounting standards board (IASB). These standards and their interpretations (SIC/IFRIC) provide conceptual framework for preparation and disclosure of financial statements all over the world. IAS16, IAS17, IAS38, IAS40, while IFRS3, business combinations (Goodwill). IAS38 describes criteria for the recognition of intangible assets; IAS 38 stated that intangible assets should only be recognized as an asset if these are qualified with the following conditions or criteria:

Identifiable

This is capable of being separated from other assets, may be sold, leased, transferred, rented either individually or in combination with a related contract; or arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or other rights or obligations.

Controllable

An entity controls an asset if it has the power to obtain the future economic benefits flowing from underlying resources and to restrict the access of others to those benefits.

Future economic benefit

Future economic benefit may include revenue from sales or products, services or processes, but also includes cost saving or other benefits from the use of an asset.

Presently, financial statements are prepared under the guidelines of conventional reporting framework and treat human resources investment as expenditures, and write-off these investments from current year profits and loss account, which is violation of IAS1 (presentation of financial statements) which states that financial statement should be prepared on the basis of matching concept. In current era of globalization, HR are increasingly important parts of an organization's total wealth. HR should also be recorded as an asset in financial statements under the head of fixed assets. There are two major reasons for recognition of human capital as an asset; first, HR are a valuable resource for a firm to sustain a long-term competitive advantage as long as employees rendered services for organization, future economic benefits flow towards organization from the investment made on HR. Secondly, the value of HR is based on the knowledge, capabilities and skills developed in the organization through investment. American Accounting Association (AAA) defines human resource accounting (HRA) as the technique or tool which computes the value of human capital based on the following characteristics: "the process of HR identification, measuring and also communication to all interested parties" (American Accounting Association, 1970). This discussion on the importance of human capital investment finally led to two important questions;

- 1) How to measure the value of human capital assets (HCA) under the head of intangible assets, and;
- 2) How to make improvements in reporting framework through disclosure of human capital value in the financial statements of organizations.

The concept of the human capital accounting is on the early stages for the implementation in corporate sector of developed as well as in under developed countries like Pakistan, India, China, Portugal, Germany, Canada Greece, United Kingdom and New Zealand. There is an urgent need to establish the international reporting framework which provides the guide lines for the valuation of HR value in financial statements but unfortunately until now, there is no single reliable method, available for valuation and measurement of human resources values all over the world. In this current study, author tried to explore the new more reliable method for HCA valuation.

The basic objective of the study is to indicate the importance of human capital accounting and its disclosure in the financial statement, and also provide recommendations for improvement in conventional financial reporting framework. According to IAS1 presentation of financial statements;

i) income or expenses should be classified according to the relevant accounting period. Investment on the HCA provides the benefit over the expected service period of an employee not for one single period. These investments should be capitalized and amortized over the expected service of an employee. In emerging economies, investors and other stakeholders requires “more transparent information for internal strategic and external investment decisions” while OECD requires that “organizations should measure what the employees/people know” and few countries already opt HRA concept while the rest are going for it, because it is a requirement of the current corporate world.

ii) National financial reporting standards (NFRS) and IFRS are not developed, and fail to incorporate the current economic and world businesses developments all over the world.

iii) There should be “True and fair” presentation of the financial statements with inclusion of HCA under the head of intangible fixed assets.

iv) Based on the literature, providing a reliable method for the valuation of human capital value is the biggest challenge and issues faced by accountants in implementation of human capital accounting concept.

v) How HCA will facilitate management in managing and safeguarding organizational assets.

vi) How disclosure of HCA in the financial statements will facilitate the external and internal users, investment and strategic decision making.

LITERATURE REVIEW

According to the United Nations Development Programme (1990), “People are the real wealth of a nation”. Human development approach is based on two major components which are people and development. These are called “evaluating aspect” and the “agency aspect” (Human development report, 2002). Evaluation aspects are used as tool by the management to facilitates employees/people to expand capabilities and skills required for achievements while “agency aspects” describe that employees are not only beneficial of the financial, social, economic growth in a country as “people as real wealth of a nation” (United Nations Development Programme, 1990). In modern economies, HR managers stand to face two major challenges. One is to foster the operational performance of organizations and two, to support employees to achieve competitive edge. The employees’ practices are considered to determine actual participation of employees services in the value creation process. That is, the reason for which management of every firm needs to incur more costs for economic benefits, increases inflow of revenue to the organization’s services, products. This value addition is due to the interaction between the material and employees skills, capabilities and experience during the production

process. Organizations cannot proceed only with property plant and equipment, or IT systems alone. It is a paradox that organizational books of account do not reflect the valuation of this important information.

As the globalization create an impressive impact on the competitive environment in businesses all over the world, the driver for the value creation in businesses are going to change in this competitive environment (Cuganesan, 2006). In the current modern business environment, drivers for value creation are changed from the financial, physical capital to the HCA. Success of organizations now depends upon the knowledge of HCA; they can simply adopt high-tech controls and drive the organizations towards its goals and objectives. HCA is considered as the foundation of higher financial performance in the businesses at the national level as well as international level (Carmeli and Tishler, 2004). Due to the change in value creation drivers’ organizations requires the information regarding these drivers, the evolution of HRA fulfills the needs of organizations. According to Likert (1971), HRA provides all the information relevant to the HR in organization; basically it is managerial tool which is designed for top level management to provide the clear understanding cost and benefits derived on the basis of decisions regarding HR. The concept of HCA and its accounting was given by Scott (1925), “support for treating employees as assets and accounting for their values”. Although, the interest in HCA was increased when in 1950s Rensis Linket, introduced the term “Human assets” which highlight the HR available to the organizations (Okpala and Christopher, 2010); derivation of the HCA concept started in 1925. Although researchers made efforts in the area of HRA from last four centuries, the real work observing when HR are treated as an “asset” started only after the evolution of “behavioral approach” that was after 1960.

Evolution of HRA

First phase (1960-1966)

Origin of HRA in the academic interest and different theories from the academicians and professional, derivation of these theories and models for the calculation of the human capital accounting concept are originated from the studies like economic theories, capital theories and psychological theories from the different perspectives for the valuation of HRA.

Second phase (1967-1970)

During the second phase, there is more emphasis on the development of new models and validating the different models for the valuation of human capital. Aim of the researchers is to develop the tools for the top level

management for the effective management of the HR. In the second phase, one of the PhD studies was conducted by Roger Hermanson for valuation of human capital accounting and the work or concept was undertaken for the purpose of development of new human capital accounting models. The concept of opportunity cost method (OCM) was given by Hikimian and Jones (1967) which supported economist's concept or theory of competitive bid price (CBP) with the departments of an organization for an employee; the value of human asset is being determined on the basis that what other departments of the organization are willing to bid for him/her. Total value of the company's HCA is determined through capitalization of bid prices of scarce work force. There are few limitations in OCM. Firstly, value is based on the importance of department rather than skills, capabilities and tactic knowledge retained by employees. Secondly; it assumes that only scarce resources have the value (Hekimian, 1967). Brummet et al. (1969) introduced the concept of historical cost method (HCM) in 1969. HCM considers all the cost which is necessary to bring the HCA into the working condition, that is acquisition, selection, training and development; but under the HCM, the revenue expenditures are expensed out in the current year profit and loss account as under the conventional accounting and capital expenditures should be capitalized and amortized over the expected period of service of employees. In case an employee leave earlier than expected service life in organization, remaining capitalized cost should be charged as loss in the profit and loss statement (Flamholtz, 1974a).

Third phase (1971-1977)

In the third phase, there was marked by the extensive attention in the field of HRA and a tremendous growth in the research area of HRA; there is more focus on the practical implication of the human capital accounting in organizations. Flamholtz (1974b) presented that the concept of "Replacement cost approach" was based on the "cost based theories" method which considered that all the elements of the cost are necessary to bring the person with the same abilities. Few researchers and professionals argue that replacement cost cannot truly embed the cost of all the components (Likert, 1971). On the basis of Likert work, Lev and Schwartz introduced the concept of present value of future earnings (PVFE) for the valuation of HR. According to Lev and Schwartz, this economic value can be estimated on the basis of future earnings, and these earnings should be related to the service period of the employees. These economic earnings should be discounted at the appropriate discount rate to determine the present value of human capital. Irving Fisher stated that, the value of human capital must be computed from the estimated future net earnings not

vice-versa (Lev and Schwartz, 1971). Net benefit model (NBM) was given by Morse (1973). According to Morse (1973), the value of human capital and human asset is equals to the present value of total payments made to the employees during his service period in an organization Morse (1973) stated the following formula for calculation of the value of human capital.

Fourth phase (1978-1980)

Fourth period is the period of decline in interest in HRA in the organizations due to the complex issues in the HRA valuations and practical implementation. There is a need to explore the new dimensions or models for the calculation of human capital value; organizations found that the idea of human capital accounting is interesting but there is large sums of financial or energy wastage or investing lots of time period on the support of research.

Fifth phase (1980-onwards)

There was sudden restoration in the interest of HRA because organizations were going to convert operations from physical assets to resource based economies and the value of human capital was critically realized. Research shows that the organizational performance is solely based on the intellectual assets rather than physical assets. Different types of models were developed for valuation of human capital accounting according to the organizational requirements. From the mid-90s, there was a great focus on the application of HRA to business management.

Numerous theories/models were developed from the period of 1925 to 1986 which were presented under the label HRA "Human capital accounting was first introduced in 1960s by Theodore Schultz. Prior to 1960s, researchers dealt with the concept value of organizational workforce" (Okpala, 2010). "As early as 1676, Sir William Petty tried to attribute the profit of an organization to the labor of the people" (Petty, 1691). He continued to criticize by suggesting that the causes of such losses could include basic organizational changes like employees leaving the firm (Olin, 2001).

Various other authors like Hermanson (1964), provided the method for the valuation of HCA through his proposed model "Adjusted discount future wages" (Hermanson, 1964). After observing the work of Hermanson, Likert's "Socio-Psychological model of HR valuation" was introduced in the 1967. According to Linkert, there are many variables which determines the value of organizational productivity, but the major contribution is through the "the present value of contributions employees make in the organization over their organizational life less the cost which is insured on the employees to bring them in the condition that they are

able to give the services to the organization.” After that, Jaggi and Lau (1974) gave the method for the valuation of human resources through the concept of “Human resources valuation”, after observing the work of Flamholtz’s model (Jaggi, 1774). Subsequent to the work of Jaggi and Lau (1976), Ogan (1976) gave the new idea for the valuation of human capital through “Certainty equivalent Net benefit”; Prabhakar (1983) gave the new idea for the calculation the HR value under the concept of HRA (Dicarlo, 1983). However, despite many limitations presented, methods are used for valuation of HR by organizations all over the world. There is still room for improvement in HRA measurement approaches. Many years are required for implementation of the human capital accounting in the financial statements, because changes are required in local as well as international level. New concept has emerged in the HRA non-monetary based valuation of the human assets. Some researchers argued that not all employees are wringing for the monetary benefits; this is acknowledged in many economics in this global village, and now management should also focus on this concept for the effective management of HR assets.

RESEARCH METHODOLOGY

Human capital accounting is becoming the need of the current era. Different models and tools were developed for valuation of HR due to some weakness. Most of them were out dated and few of them are still in practices to calculate the HR value, through the deep understanding of previous models and tools; we formulate the new method “human capital valuation method” (HCVM) for valuation of HR. HCVM considers the following components of investments; Acquisition Investment (recruitment, selection, contracting, placing), Familiarization Investment (orientation, basic training), Development Investment (trainings, promotions, process Improvements), Job Investment (wages, commission, rent sharing), Expected Service Period, (On the basis of past analysis/employees turnover rate/factors employees).

Acquisition Investment

Acquisition investment on human capital consist of the recruitment, selection, contracting and the investment on placing human capital on the job; the process of recruitment and selection in sequence of precise steps started from advertisement, identification, selection and hiring best candidate for job vacancy, in cost and time manners, to make the rational decision about the human resources (Davis and Werther, 1994). Recruitment and Selection process of the organization can affect the organizational performance, recruitment and selection process is found significant in cost wise or performance wise significant to the organizational performance (Holzer, 1987). All the components of the acquisition investment are major part of the organizational human resources investment practices after reviewing the literature acquisition cost and considered as component for the valuation of human capital.

Familiarization Investment

Initial orientation and training to make the human capital to position to perform the job tasks effectively and efficiently, Investment on initial training often considered new employees only; this is the

process of getting knowledge to do something in well manners.

Development Investment

According to Chris Landauer “Training and Development is something which give hope to incorporate into every manager’s state of mind” (Qureshi, 2010). Development investment remains a major activity or investment on training/development for the current or new employees to motivate growth and their competency building (Gritz, 1997) development is considered as internal activity performed by the management for the employees to attain the competitive advantage, development and training is considered as an expensive activity that affect the organizational performance (Tobias, 2000).

Job investment

According to Irving Fisher, the value of HCA depends upon the earnings of the employee; current job cost of labor is major cost of human resources, it cannot be ignored during the valuation of human capital. Job cost consists on the wages, commission, and rent sharing among the employees.

Performance appraisal investment

Performance appraisal system is designed to evaluate, influence work-related aspects and outcome. The objective of this system is to evaluate how the organization human resource system is performing and its productivity; performance appraisal system is used to appraise which are compatible with the culture and organizational behavior (Ebrahim, 2005).

Expected service period

It is an expectation on bases of employees’ turnover rate in the organization; expected service period method is derived or considered same as the use of full life of physical asset under IAS16 property, plant, equipment or it is considered as major component of the model driven for the valuation of human capital accounting for the organization.

Value of human capital

The HR valuation method is used for the valuation of HR investment. All components in this method are significant and can affect the organization performance and decision making. Author recommends this method for the valuation of human resources accounting.

Human capital valuation method

$$\sum_{t=1}^N \int_{t=1}^N A_{i,t} dt + \int_{t=1}^N F_{i,t} dt + \int_{t=1}^N D_{i,t} dt + \int_{t=1}^N PA_{i,t} dt \quad (1)$$

Where

$A_{i,t}$, Acquisition investment for expected service period t ;

$F_{i,t}$, familiarization investment for expected service period t ;

$D_{i,t}$, development investment for expected service period t ;

$PA_{i,t}$, performance appraisal Investment;

N , total number of years;

t , current period.

Table 1a. Case study: Statement of financial position without disclosure of human assets of company A.

Company A							
Statement of financial position year ended 31 st December							
	2008	2009	2010		2008	2009	2010
Assets	Rs. In Million			Liabilities	Rs. In Million		
Property (Net)	18,000	22,000	24,000	Long-term	20,000	25,000	26,000
Current assets	5,000	7,000	9,000	Current liabilities	3,000	4,000	7,000
Total	23,000	29,000	33,000	Total	23,000	29,000	33,000

Table 1b. Case study: Statement of financial position with disclosure of human asset of company B.

Company B							
Statement of financial position year ended 31 st December							
	2008	2009	2010		2008	2009	2010
Assets	Rs. In Million			Liabilities	Rs. In Million		
Property (Net)	18,000	22,000	24,000	Long-term	20,000	25,000	26,000
Current assets	5,000	7,000	9,000	Current liabilities	3,000	4,000	7,000
Human assets	10,000	12,000	14,000	Retained earnings	10,000	12,000	14,000
Total	33,000	41,000	47,000	Total	23,000	29,000	33,000

Amortization rate

$$\sum_{t=1}^N \int_{t=1}^N \frac{A_{i,t}}{x} dt + \int_{t=1}^N \frac{F_{i,t}}{x} dt + \int_{t=1}^N \frac{D_{i,t}}{x} dt + \int_{t=1}^N \frac{PA_{i,t}}{x} dt \quad (2)$$

Investment on the human capital should be amortized over the expected service period in current year profit and loss account. Amortization rate should be derived through the above mentioned formula.

Where $A_{i,t}$, Acquisition investment for expected service period t ;

$F_{i,t}$, familiarization investment for expected service period t ;

$D_{i,t}$, development investment for expected service period t ;

$PA_{i,t}$, performance appraisal investment;

X = expected service period;

N = total number of years;

t = current period.

All components which are used in the HCVM for valuation of the HCA, have the significant impact on the organizational performance internal decision making and significant parts of the human resource activities in organizations from the financial prospective. These investments have the ability to convert the current year profits into losses if any of these investments wrongly charged in the current year profit and loss statement.

ETHICAL CONSIDERATION

Human capital accounting is the need of current economic businesses all over the world. There is a need for the standardized method for the calculation of human

capital accounting. Top level management might use this tool for the windows dressing through overstatement of assets and understatement of expenses which ultimately leads to high profits for year which shown that organization is performing well and management may manipulate final accounts according to their requirement. The concept of HCA require highly ethical environment, integrity, honesty, code of ethical which should be strictly implemented by the organizations and act upon them. After the globalization businesses are required to float information to the all stakeholders, not only to the shareholders, competitors investors also required these information for the rational decision making; beneficiaries of this study is whole world's economic business organizations and investors and other stakeholders.

LIMITATIONS AND FUTURE RESEARCH

Concept of human capital accounting is struggling for the acceptance in the financial statements but it is due to numerous limitations in the measurement/valuation methods of the human assets. Presently, not even a single method is reliable for the valuation of the human assets while the researchers are trying to explore new and more reliable methods for the valuation of the HCA. Value of the human assets is depended on the various variables. Some of them are difficult to measure like expected service period. Probability of leaving to organization biggest revolution is required in local as well as in international accounting and reporting frameworks for the implementation of the HRA concept in the financial

statements, which is not possible in short period of spin; that is the biggest problem. Hurdle the way of implementation of the HRA in the financial statements.

The concept of HRA is relatively new for the underdeveloping countries. There is a need for the reliable measurement approach/valuation methods for the calculation of HCA value in the financial statements. In future, this study can be applied to the other countries or organizations according to their cost of HR activities and make the comparison with those countries who has not adopted these methods for the valuation of HCA (Table 1a, b).

REFERENCES

- Alli AM (2007). Globalization: Its Effects. *Int. Bus. Eco. Res. J.*, 6 (1).
- American Accounting Association (1970). *A Statement of Basic Accounting Theory*. Evanston, IL: AAA.
- Brummet RL, Flamholtz EG, Pyle WC (1969). Human Resource Accounting: Development and Implementation in Industry. *Found. Res. Hum. Behav.*, pp. 217- 224.
- Carmeli A, Tishler A (2004). The relationship between intangible organizational elements and organizational performance . *Strat. Manage. J.*, pp. 1257-1278.
- Cuganesan SP (2006). *Intellectual Capital Reporting: A User Perspective*. Academy of Accounting and Financial Studies. New Orleans, USA: Spring International Conference.
- Darling JR (1999). Organizational excellence and leadership strategies: Principles followed by top multinational executives. *Leadersh. Org. Dev. J.*, pp. 309–321.
- Davis K, Werther WB (1994). *Human Resources and Personnel Management*, 5th edn, McGraw-Hill: New York, 67: 28.
- Dicarlo R (1983). Human Resource Accounting. *Syn. Cost Manage.*, pp. 59-62.
- Ebrahim SRV (2005). A Contract of HRM and TQM Aroaches to Performance Management: Some Evidence. *Brit. J. Manage.*, 211-230.
- Fitz-enz J (1995). *To measure human resources management*. New York: McGraw-Hill.
- Flamholtz E (1974a). "Human Resource Accounting: A review of theory and research" *J. Manage. Stud.*, 11(1): 44-61.
- Flamholtz EG (1974b). *Human Resource Accounting*. California: Dickenson Publishing Company Inc.
- Gritz R (1997). The impact of training on the frequency and duration of employment. *J. Economet.*, pp. 21-51.
- Hekimian JS (1967). Put People on Your Balance Sheet. *Harv. Bus. Rev.*, pp. 105-108.
- Hermanson RH (1964). *Accounting for human assets*, Michigan State University Occasional Paper No. 14, Bureau of Business and Economic Research, East Lansing, Michigan.
- Holzer H (1987). Hiring procedures in the firm: Their economic determinants and outcomes, in *Human resources and firm performance*. Washington DC: BNA Press.
- Human Development Report (2002). *Deepening Democracy in a Fragmented World*. New York: Oxford University Press.
- Jaggi BA (1774). Towards a Model for Human Resource Valuation. *Acc. Rev.*, pp. 323-325.
- Lev B, Schwarts A (1971). On the use of Economic Concept of Human Capital in Financial Statements. *Acc. Rev.*, pp. 102-105.
- Likert RA (1971). Human Resource Accounting: A Human organizational Measurement Approach. *Fin. Anal. J.*, pp. 72-80.
- Mayo A (2006). *The Human Value of the Enterprise*. USA: A& C Black Publishers Ltd.
- Meyer C (2007). Shareholder Value Accounting-the value relevance of financial statement data and the determinants of accounting method choices. *March*.
- Morse WJ (1973). A Note on the Relationship between Human Assets and Human Capital. *Acc. Rev.*, pp. 587-590.
- Ogan P (1976). A Human Resource Value Model for Professional Service Organizations. *Acc. Rev.*, p. 306.
- Okpala P (2010). Human Capital Accounting and its Relevance to Stock Investment Decisions in Nigeria. *Euro. J. Econ.*, pp. 65-72.
- Okpala P, Christopher CO (2010). Human Capital Accounting and its Relevance to Stock Investment Decisions in Nigeria. *Euro. J. Econ.*, 1-13.
- Olin SSBM (2001). *Accounting for human resources: Implications*. North Texas: Toulouse School of Graduate Studies.
- Petty W (1691). *History of British Economic Thought*. London: Routledge.
- Polanyi M (1962). *Personal knowledge: Toward a past critical philosophy*. Chicago: University of Chicago Press.
- Qureshi TM (2010). *Human Resource Management as Performance Tool*. Deutschland: VDM Verlag Dr. Muller GmbH and Co.KG.
- Scott D (1925). *Theory Accounts*. NewYork: Hotl, Rhinehart, J.D.
- Sveiby K (1997). *The New Organizational Wealth: Managing and Measuring Knowledge Based Assets*. San Francisco: Berrett-Koehler Pub. Inc.
- Tobias SA (2000). *Training and Retraining: A Handbook for Business, Industry, Government, and the Military*. New York: Macmillan.
- United Nations Development Programme (1990). *Human Development Report*. New York: Oxford University Press.